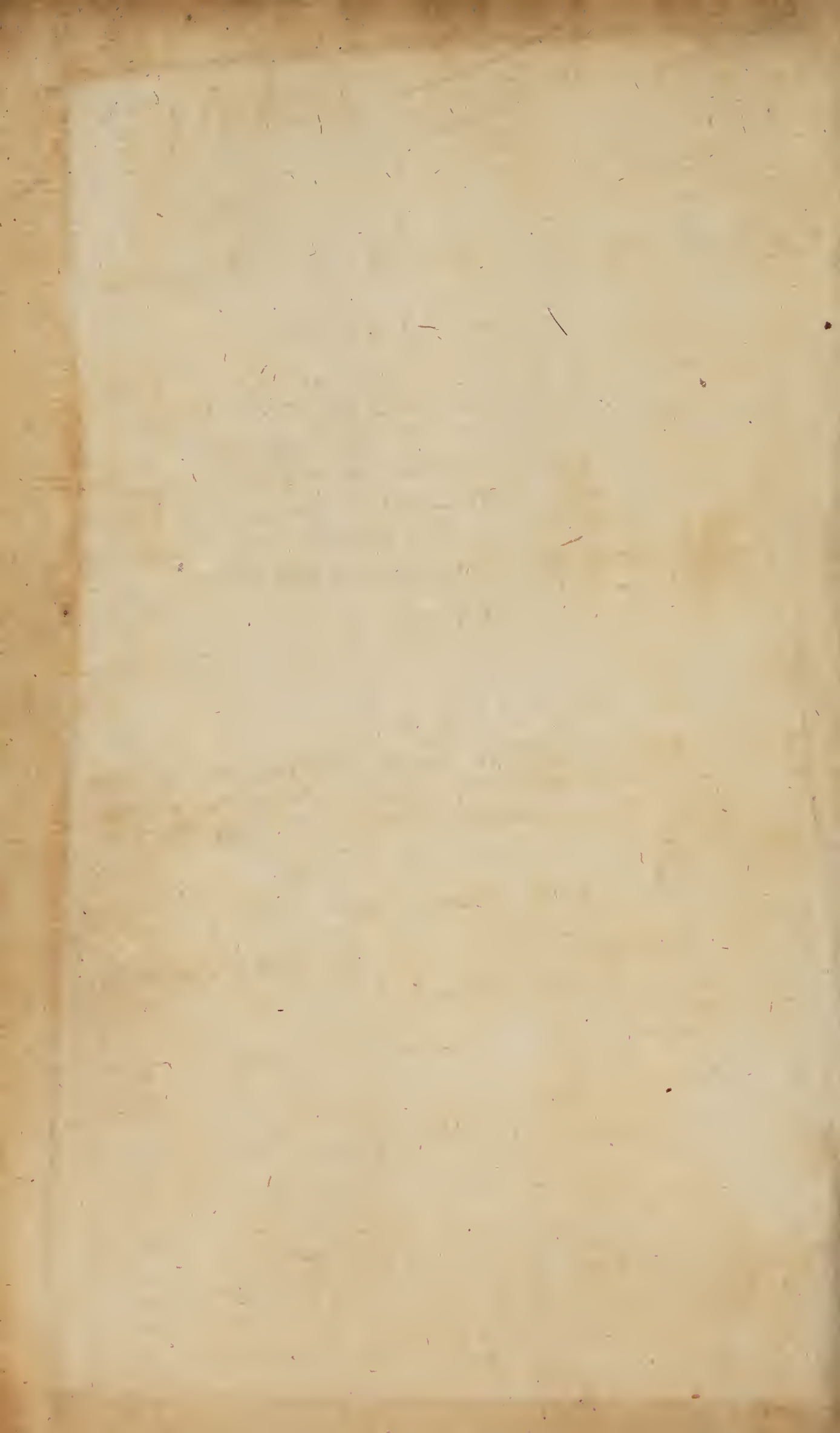




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# TIME's Telescope

Universal and Perpetual,

Fitted for all Countries and Capacities;

CONTAINING

Perpetual TABLES, fitted to the Old and New  
Style; shewing the Moveable and Fixed Feasts, the  
Rising and Setting of the Sun and Moon; and  
how to find the Moon's Place at any time proposed:  
Also the Changes and Eclipses calculated for Thirty  
Years; with Rules to find them for ever, according  
to the middle Motion of the Sun and Moon.

ALSO

The Magnitudes and Distances of the PLANETS;

AND

A Brief Discourse of all kinds of Meteors, or Ap-  
pearances in the Heavens; Natural Prognosticks of the  
Weather: With a General View of the Four Parts of  
the World.

To the Whole is Added,

A Short Description of **TIME**, and how it ought to  
be Redeem'd.

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By **DUNCAN CAMPBELL.**

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**LONDON**

Printed, and sold by **J. WILCOX**, over-against  
the New Church in the Strand, **J. OSWALL**, in the Poultry;  
and for the Author, at the Highlander in Hedge-Lane near  
Charing-Cross. **MDCCLXXXIV.**





To the Honourable

*Sir* **JAMES CAMPBELL,**

*of Ardkinles, Baronet ; And Member of  
the Honourable House of Commons.*

*Honoured Sir,*



As it is customary for Authors, to dedicate the Products of their Studies, to one whose Name is dear to themselves, Venerable to the Publick ; or one who well under-

## *The Dedication.*

stands the Subject on which they write, that thro' the Approbation of a Learned Patron their Works may be the more acceptable to the World: I, likewise (having all these Views complicated in one) with the greatest submission recommend this *Telescope of Time*, Sir, to your Patronage and Protection. And tho' this Book was of less general use than it really is, I'm thoroughly perswaded, Your Name in its Front, is such an Ornament as will be sufficient to recommend it to the World; and especially to those who have the Honour, Sir, of being acquainted with you.

Thus having arriv'd at the Height of my Ambition (an Opportunity of shewing my Gratitude for Favours already received) I subscribe myself, with great Pleasure, and profound Humility,

S I R,

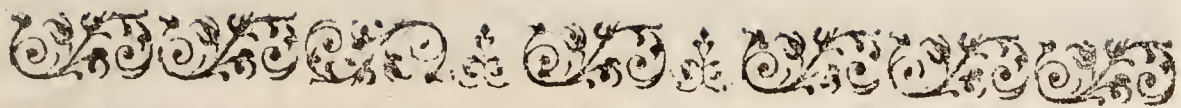
*Your Honour's Most Dutiful,*

*Most Obedient, and*

*Most Obliged Humble Servant,*

**Duncan Campbell.**





T H E  
P R E F A C E.

*Reader,*

**I** Acknowledge my self much oblig'd to you for fixing your Eye to this *Telescope*: I hope, the Prospect it produces, will answer your Expectation; for it will represent to your View, Things Visible and Invisible! At the Distance of Millions of Miles, and Thousands of Years! It will plainly shew you the dark Recesses of Time and Distances; which is more than any other Telescope pretends to. You cannot furnish your Family with an Instrument that will be of more daily and yearly use to your self and Posterity than this: For we must allow, that the true Knowledge of Time is indispensibly necessary for Mortals, whose Lives are nothing else but uncertain Members of that precarious Being. And this Knowledge is attained to, by the Motion and Revolutions of the Celestial Bodies; especially, by that of the Sun and Moon, and of the Earth it self. [See Gen. 1, and 14.] Therefore I recommend this Telescope to those who are short-sighted in Astronomy: It will give them a clear View of these Motions, on which Time depends; and consequently of Time it self.

The meanest Reader need not despair of understanding the obscurest Passage in this Book, if he does but carefully and patiently peruse it once or twice over: For all the Tables are so fully explained, and so many Examples given, that a School-Boy, who is entirely a Stranger to Astronomical Books, may readily under-

## *The P R E F A C E.*

stand it. But it is a great fault in some People, to hurry over the Explanations of such Books as this, without ever turning to the Tables, to which they refer; and consequently they lose the Pleasure and Profit of comprehending what they read

If they look in a Book, and happen to meet with a Paragraph that is not wrote in their Stile, they are apt to accuse the Author of Obscurity, or themselves of want of Understanding; or (which is worse) blame their Parents for not giving them a liberal Education.

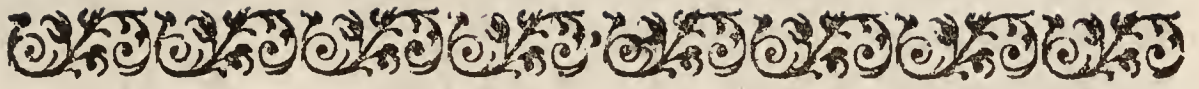
Therefore, I advise the Learner to read one Example over, and then look in the Table to which that directs, and try if it answers: If it does not, he must ponder it over, till he brings it to bear.

But when once you make the Tables familiar to you, you may proceed with Ease and Pleasure, without the Trouble of reading the Explanations.

*First*, Learn the Use of these Tables that are most necessary, namely, those shewing the Day of the Month, and Day of the Week, the Moveable Feasts, the Rising and Setting of the Sun and Moon, the Changes and Eclipses, the Tyde-Table, &c.

*Reader, Yours, &c.*

D. C.

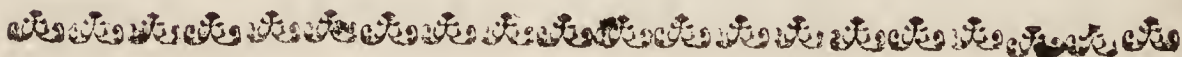


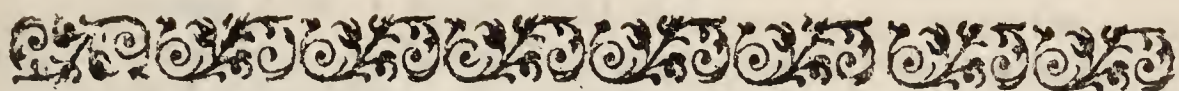
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*The Explanation of the Two following TABLES.*

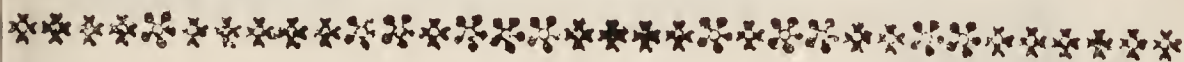
**I**N the first Table, Page 4. look for the Year on the Left Hand, and in that one Line to the Right, and under the Months, you have your Desire.

*Example 1.* I would know, what Day of the Week begins every Month in the Year 1734? Having found the Year in the first Column, I find against it under *Jan. Tuesday*, under *Feb. Friday*, *March and Nov. Friday*; and under *April and July, Monday*; *May, Wednesday*; *June, Saturday*; *Aug. Thursday*; *Octob. Tuesday*; *Septemb. and Decemb. Sunday*.

*Example 2.* The Year 1832. From the Year, guide your Eye to the Right; there you find *L.* signifying Leap-Year: And against *L. 21*, the Cycle of the Sun; and in the same Line, forward, you find the first day of every Month in the Year; for *Jan. Friday*, *Feb. Monday*, &c.

*Example 3.* Let it be requir'd to know, what day of the Week begun every Month in the Year 1700? To find this, I must look for the Cycle of the Sun in the Table, Page 7; which I find to be *1*, for the said Year. Now, I seek for *1* in this Table, in the Column, titled *Cycle of the Sun*; and having found it, I find against it, for *Jan. Monday*, *Feb. Thursday*, and so thro'. Here you see, you have nothing to do, but to find the Year, or the Cycle of the Sun for any Year propos'd, in the side, the Month at the top; and in the Angle, or Place of meeting, you have the Day that the Month begins on.

*Example 4.* The Year 1904, Cycle of the Sun 9. I enter the Table with that Number: To the Right I find *Thursday*, *Sunday*, *Monday*, &c.



*The Explanation of the second Table.*

**T**HIS Table is divided into seven squares, or small Tables for the 7 Days of the Week; and each square begins with a red Day, or first day of the Month. *Example 1.* I desire to know, what day of the Week, any day of *Jan.* falls in the Year 1734. By the preceding Table I find, *Tuesday* is the first day of *Jan.* I look for *Tuesday* in this Table, and I see it

A begin

## 2 The Explanation of the two following Tables.

begins the third square on the Left Hand ; and against it, 1-8-15-22-29, all *Tuesdays* ; against *Wednesday*, 2-9-16-23-30, which are all the *Wednesdays* in *January* ; and again, I would know, what day of the Month the third *Friday* in *January* is ? I seek for *Friday* in that square, and against it I find 4-11-18-25, and 18 answers the Question, 3<sup>d</sup> *Friday*. And I would know, what day of the Week is the 27<sup>th</sup> day ? I look for 27 in the square ; against it, on the Left, I find *Sunday* ; and all the Numbers in that Line are *Sundays*. If it be required, What day of the Week begins the *Gregorian* or *Roman* Month, you must in this Case see what Day of the Week is the 4<sup>th</sup> of the *Julian* or *British* Month ; and that Day begins the *Roman* Month, till the Year 1800 ; from 1800 till 1900, the 3<sup>d</sup> ; from 1900 till 2100, the 2<sup>d</sup> ; from 2100 till 2200, the same Day of the Week that begins our Month, begins theirs also : For the first of ours will be then equal to the 15<sup>th</sup> of theirs (the same Day of the Week, 1 and 15.)

---

### *Of the Roman Day of the Month.*

**B**Y the foregoing Rules, find what day of the Week is the 4<sup>th</sup> of the *British* Month, and that is the 1<sup>st</sup> of the *Roman* Month, as I have hinted before. For Example ; the 4<sup>th</sup> day of *Jan.* in the Year 1734, is *Friday* : Now I seek for the square in the 2<sup>d</sup> Table, that begins with *Friday* ; and having found it, against it to the Right Hand, I have all the *Fridays* in the Month ; in the second Line, all the *Saturdays* ; in the third, all the *Sundays*, and so on. Observe, that in each of these squares you have from 1 to 31, the highest Number of Days in any Month : so that you are to mind the Number of Days in the Month you reckon in ; you'll find every Month's Number of Days set down along with it in the first Table. Note, when these Years are expir'd, that the Reader may cut them off.

*Mind th' Explanation of each Table,*

*To understand them, that will make you able.*

*They're plain and obvious to the Learner's View,*

*Who my Directions willingly pursue.*



A Table shewing the First Day of the Month for ever.

The Year of Christ, Our Prophet, King, and Priest. Let his Name be ador'd; For of all he is Lord.				L. for Leap Year	Cycle of the Sun	Jan. has 31 days.	Feb. 28 or 29 days	Mar. 31 Nov. 30	Apr. 30 July 31	May has 31 Days	June has 30 Day	Aug. has 31 days	Oct. has 31 days.	Sept. 30 Dec. 31
1734	1762	1790	1818		7	tuesd	frid.	frid.	mond	wedn	satur	thur	tues.	sund.
1735	1763	1791	1819		8	wedn	satur	satur	tuesd	thur	sund	frid.	wedn	mond
1736	1764	1792	1820	L.	9	thurs.	sund	mond	thurs	satur	tuesd	sund	frid.	wedn
1737	1765	1793	1821		10	satur	tuesd	tuesd	frid.	sund	wedn	mond	satur	thur
1738	1766	1794	1822		11	sund.	wed.	wedn	satur	mond	thurs	tuesd	sund.	frid.
1739	1767	1795	1823		12	mond.	thur.	thur.	sund	tuesd	frid.	wedn	mond	satur
1740	1768	1796	1824	L.	13	tues.	frid.	satur	tuesd	thur	sund	frid.	wedn	mond
1741	1769	1797	1825		14	thurs.	sund.	sund	wedn	frid.	mond	satur	thurs	tuesd
1742	1770	1798	1826		15	frid.	mon	mond	thurs	satur	tuesd	sund.	frid.	wedn
1743	1771	1899	1827		16	satur	tues.	tuesd	frid.	sund	wedn	mond	satur	thur
1744	1772	1800	1828	L.	17	sund.	wedn	thur	sund.	tuesd	frid.	wedn	mond	satur
1745	1773	1801	1829		18	tues.	frid.	frid.	mond	wedn	satur	thur	tues.	sund.
1746	1774	1802	1830		19	wed.	satur	satur	tuesd	thur	sund.	frid.	wedn	mond
1747	1775	1803	1831		20	thur.	sund.	sund.	wedn	frid.	mond	satur	thur	tuesd
1748	1776	1804	1832	L.	21	frid.	mond	tuesd	frid.	sund	wedn	mond	satur	thur.
1749	1777	1805	1833		22	sund.	wedn	wedn	satur	mond	thurs	tuesd	sund	frid.
1750	1778	1806			23	mon.	thur.	thur	sund	tuesd	frid	wedn	mond	satur
1751	1779	1807			24	tues.	frid.	frid.	mond	wedn	satur	thur	tuesd	sund.
1752	1780	1808		L.	25	wed.	satur	sund.	wedn	frid.	mond	satur	thur	tues.
1753	1781	1809			26	frid.	mond	mond	thurs	satur	tuesd	sund	frid.	wedn
1754	1782	1810			27	satur	tuesd	tuesd	frid.	sund	wedn	mond	satur	thur
1755	1783	1811			28	sund.	wed.	wedn	satur	mond	thurs	tuesd	sund.	frid.
1756	1784	1812		L.	1	mon.	thur	frid	mond	wedn	satur	thur	tues.	sund.
1757	1785	1813			2	wed.	satur	satur	tuesd	thurs	sund.	frid.	wedn	mond
1758	1786	1814			3	thur.	sund.	sund.	wedn	frid.	mond	satur	thur	tues.
1759	1787	1815			4	frid.	mond	mond	thurs	satur	tuesd	sund.	frid.	wedn
1760	1788	1816		L.	5	satur	tuesd	wedn	satur	mond	thur	tuesd	sund.	frid.
1761	1789	1817			6	mon	thur.	thurs	sund.	tuesd	frid.	wedn	mond	satur

Sunday



<b>Sunday</b>	1	8	15	22	29
Monday	2	9	16	23	30
Tuesday	3	10	17	24	31
Wednesday	4	11	18	25	
Thursday	5	12	19	26	
Friday	6	13	20	27	
Saturday	7	14	21	28	

Enter this Table with the First Day of the Month, and in that Square you have your desire at one View.

<b>Monday</b>	1	8	15	22	29
Tuesday	2	9	16	23	30
Wednesday	3	10	17	24	31
Thursday	4	11	18	25	
Friday	5	12	19	26	
Saturday	6	13	20	27	
Sunday	7	14	21	28	

<b>Thursday</b>	1	8	15	22	29
Friday	2	9	16	23	30
Saturday	3	10	17	24	31
Sunday	4	11	18	25	
Monday	5	12	19	26	
Tuesday	6	13	20	27	
Wednesday	7	14	21	28	

<b>Tuesday</b>	1	8	15	22	29
Wednesday	2	9	16	23	30
Thursday	3	10	17	24	31
Friday	4	11	18	25	
Saturday	5	12	19	26	
Sunday	6	13	20	27	
Monday	7	14	21	28	

<b>Friday</b>	1	8	15	22	29
Saturday	2	9	16	23	30
Sunday	3	10	17	24	31
Monday	4	11	18	25	
Tuesday	5	12	19	26	
Wednesday	6	13	20	27	
Thursday	7	14	21	28	

<b>Wednesday</b>	1	8	15	22	29
Thursday	2	9	16	23	30
Friday	3	10	17	24	31
Saturday	4	11	18	25	
Sunday	5	12	19	26	
Monday	6	13	20	27	
Tuesday	7	14	21	28	

<b>Saturday</b>	1	8	15	22	29
Sunday	2	9	16	23	30
Monday	3	10	17	24	31
Tuesday	4	11	18	25	
Wednesday	5	12	19	26	
Thursday	6	13	20	27	
Friday	7	14	21	28	

*The Explanation of the following Table.*

**L**OOK for the even Hundreds at the Top, and the Parts of an Hundred in the Left Side ; and in the Place of meeting you have the Cycle of the Sun. Let it be requir'd, to find the Cycle of the Sun for the Year 1734 ? I look for 1700 at the Top, and for 34 in the Side. I find 1700 in the first Column for the Hundreds, and 34 in the second Column for the odd Years, and in the Angle of Meeting, I find 7, the Cycle of the Sun for the said Year.

Now, for the Dominical Letter for that Year, seek the Cycle of the Sun thus found, in the last Column but one on the Right in the Table ; and against it, you have the Dominical Letter *F*.

Example 2. I desire to know the Cycle of the Sun for the Year of Human Redemption 1700 ? I seek the Year from the Top ; I find it in the first Column of Hundreds ; and in the next Line beneath, and against the 0 in the Side, I find 1, the Number requir'd. Now I look for this Number 1 in that Column titled at Top, (*Cycle Sun,*) and against it I find *G F* ; it being Leap-Year, *G* serves till the 24th of *February*, and *F* throughout the rest of the Year.

*Note,* Till 1800, you have the Dominical Letter against the Year, on the Right Hand.

A Table shewing the Cycle of the Sun, and the Dominical Letter, from the Year of our Lord 1700, to the Year 4400, and may be continu'd for ever,

The odd Year is always found here.				3800	3900	4000	4100	4200	4300	4400	Cycle Sun	Dom. Let.
0	28	56	84	1	17	5	21	9	25	13	1	G F
1	29	57	85	2	18	6	22	10	26	14	2	E
2	30	58	86	3	19	7	23	11	27	15	3	D
3	31	59	87	4	20	8	24	12	28	16	4	C
4	32	60	88	5	21	9	25	13	1	17	5	B A
5	33	61	89	6	22	10	26	14	2	18	6	G
6	34	62	90	7	23	11	27	15	3	19	7	F
7	35	63	91	8	24	12	28	16	4	20	8	E
8	36	64	92	9	25	13	1	17	5	21	9	D C
9	37	65	93	10	26	14	2	18	6	22	10	B
10	38	66	94	11	27	15	3	19	7	23	11	A
11	39	67	95	12	28	16	4	20	8	24	12	G
12	40	68	96	13	1	17	5	21	9	25	13	F E
13	41	69	97	14	2	18	6	22	10	26	14	D
14	42	70	98	15	3	19	7	23	11	27	15	C
15	43	71	99	16	4	20	8	24	12	28	16	B
16	44	72		17	5	21	9	25	13	1	17	A G
17	45	73		18	6	22	10	26	14	2	18	F
18	46	74		19	7	23	11	27	15	3	19	E
19	47	75		20	8	24	12	28	16	4	20	D
20	48	76		21	9	25	13	1	17	5	21	C B
21	49	77		22	10	26	14	2	18	6	22	A
22	50	78		23	11	27	15	3	19	7	23	G
23	51	79		24	12	28	16	4	20	8	24	F
24	52	80		25	13	1	17	5	21	9	25	E D
25	53	81		26	14	2	18	6	22	10	26	C
26	54	82		27	15	3	19	7	23	11	27	B
27	55	83		28	16	4	20	8	24	12	28	A

**P**ope Gregory XIII. finding the *Julian* Account erroneous, reform'd it after the manner of this Table. The *Julian* Year consists of 365 Days, Six Hours; which is 10 Minutes, 34 Seconds more than the real *Tropical* Year, consisting but of 365 Days, 5 Hours, 49 Minutes, 26 Seconds. Now these 10 Minutes 34 Seconds, from the first Year of the *Julian* Account (which took date before the Birth of Christ) to the Year 1600, amounted to 12 Days; and so many Days the *Julians* were too soon in reckoning the Vernal Equinox, and consequently too late in reckoning their Month. The Pope looking back no farther than the Council of *Nice*, added 10 Days to his own Birth-day, Oct. 5. 1582, and call'd it the 15th; and by that means the Vernal Equinox fell on Mar. 21. This Reformation of the Calendar is call'd the *Gregorian Account*, or *New Stile*. We in *Great Britain* and *Ireland* still follow the *Julian* Account, or *Old Stile*. Our Vernal Equinox falls now on the 10th of *March*, equal to their 21st; and will be on *Christmas-Day* the Year 10200, if the World endure so long, and the *Julian* Account go on without Correction. See the Table.

A Table to reduce the *Julian* to the *Gregorian* Year.

	Days added.	10
1600		10
1700		11
1800		12
1900		13
2000	Leap-Year.	13
2100		14
2200		15
2300		16
2400	Leap-Year.	16
2500		17
2600		18
2700		19
2800	Leap-Year.	19
2900		20
3000		21
3100		22
3200	Leap-Year.	22
3300		23
3400		24
3500		25
3600	Leap-Year.	25
3700		26
3800		27
3900		28
4000	Leap-Year.	28
4100		29
4200		30
4300		31
4400	Leap-Year.	31
4500		32
4600		33
4700		34

A TABLE shewing the Roman Dominical Letter till the Year 3200, and may be continu'd for ever.

The odd Year You'll find here.				2900	3000	3100	3200
0	28	56	84	DC	FE	AG	BA
1	29	57	85	B	D	F	G
2	30	58	86	A	C	E	F
3	31	59	87	G	B	D	E
4	32	60	88	FE	AG	CB	DC
5	33	61	89	D	F	A	B
6	34	62	90	C	E	G	A
7	35	63	91	B	D	F	G
8	36	64	92	AG	CB	ED	FE
9	37	65	93	F	A	C	D
10	38	66	94	E	G	B	C
11	39	67	95	D	F	A	B
12	40	68	96	CB	ED	GF	AG
13	41	69	97	A	C	E	F
14	42	70	98	G	B	D	E
15	43	71	99	F	A	C	D
16	44	72		ED	GF	BA	CB
17	45	73		C	E	G	A
18	46	74		B	D	F	G
19	47	75		A	C	E	F
20	48	76		GF	BA	DC	ED
21	49	77		E	G	B	C
22	50	78		D	F	A	B
23	51	79		C	E	G	A
24	52	80		BA	DC	FE	GF
25	53	81		G	B	D	E
26	54	82		F	A	C	D
27	55	83		E	G	B	C

*The Explanation of the foregoing Table.*

**Y**OU are to Look for the Dominical Letters for the even Hundreds in the upper-most Line, and against the 0 in the first Column on the left Hand. You must take heed to the even Hundreds that are not Leap-Years, according to the new Stile : For tho' you find two Letters beneath them, you are to use but one.

For Example ; I demand the *Sunday*-Letter for 1800 ; I look for 1800 from the Top, and in the next Line beneath it I find *FE*. Now it being not a Leap-Year, I use *E* only, and take no Notice of *F*.

This care is to be taken only in this one Line : All the Hundreds that are Leap-Years in the Table are in the last Column on the Right-Hand. (See Table Page 8.)

Example 2. I wou'd know the Dominical Letters the Year 2000. I look for 2000 at the Top of the Table ; and in the uppermost-Line beneath it I see *BA*, both to be taken in, it being Leap-Year.

Example 3. Let it be required to know the Dominical Letters for 1828. I seek for 1800 at the Top ; for 28 in the Left-Hand side, and in the place of meeting I have *FE*, both to be used, it being Leap-Year.

Example 4. I wou'd also know the *Sunday*-Letter for this present Year 1734. I look for 1700 at the Top of the Table, for 34 in the side ; in the Angle of meeting I find *C*, the Dominical-Letter for the said Year.

The Dominical-Letter is used in finding the Day of the Month, &c. as in Page 12 ; but I have made the Day of the Month much easier to find another way. Read Page 1, and 2, &c.

**T**HE following Table, by help of the Dominical Letter, shews the Day of the Week and Month for ever in both Accounts.

Example 1, for the *British* Account: I would know what day of the Week begins *January* the Year 1734? I look for the Dominical Letter in the Table, Page 7, and I find the Domin. Letter to be *F*; now I look for *January* in the Table, which I find in the uppermost Line; and against it to the Right Hand, I look for *F*, which I find in the 6th Column; I call it *Sunday*; the next to the Right Hand (*G*) I call *Monday*, and *A Tuesday*, the first Day of the Month. Now in that Column I find 1-8-15-22-29, all the *Tuesdays* in *January*; in the next I find 2-9-16-23-30, all the *Wednesdays* in the Month; the third Column, *Thursdays*; the fourth *Fridays*, and so thro' the Year 1736, being Leap-Year, I must make use of two Letters. I look in the Table, Page 7, for the Dominical Letters, which I find to be *DC*. Now *D* serving till the 24th of *February*, I look for *D* against *January*; I find it stand above the fourth Day of the Month, which is the first *Sunday* in *January*, and the Numbers in the next to the Right, are all *Mondays*; and consequently the next Column to the Left must contain all the *Saturdays* in the Month.

Against *February* I find *D* in the first Column all *Sundays*; *C* serves for all the rest of the Year.

A Table shewing the Day of the Month, and the Day of the Week in both Accounts for ever.

Jan. 31. Octob. 31.	A	B	C	D	E	F	G
Feb. 28. Mar. 31. Nov. 30.	D	E	F	G	A	B	C
April 30. July 31.	G	A	B	C	D	E	F
May 31.	B	C	D	E	F	G	A
June 30.	E	F	G	A	B	C	D
August 31.	C	D	E	F	G	A	B
Septemb. 30. Decemb. 31.	F	G	A	B	C	D	E
	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
Days of the Month.	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31				

For the Foreign Day of the Month, take the *Gregorian* Letter, and the same method that you use in finding the *British*.

Example for 1734. I look for the Dominical Letter in the Table, Page 9, which is C, and I find it in the 3<sup>d</sup> Column against Jan. which shews me, the First *Sunday* falls on the 3<sup>d</sup> Day of the Month: I make this *Sunday* my *Key-Day* to find what Day of the Week any Day of the Month falls: So I find, Jan. begins on *Friday*, Feb. Mar. and Nov. on *Monday*. The Year 1736. A G are the Dominical Letters. By A I see Jan. begins on *Sunday*; and by the same Letter Feb. on *Wednesday*: By G Mar. and Nov. begin on *Thursday*; Apr. and July on *Sunday*, May on *Tuesday*; June on *Friday*; Aug. on *Wednesday*; Sept. and December on *Saturday*; 1800, E is the Letter; Jan. begins on *Wednesday*, Feb. Mar. Nov. on *Saturday*.



A Table shewing the Golden Number till the Year 5400.

Even Year to be found here.	3600	3700	3800	3900	4000	4100	4200	4300	4400	4500	4600	4700	4800	4900	5000	5100	5200	5300	5400			
38	57	76	95	10	15	1	6	11	16	2	7	12	17	3	8	13	18	4	9	14	19	5
39	58	77	96	11	16	2	7	12	17	3	8	13	18	4	9	14	19	5	10	15	1	6
40	59	78	97	12	17	3	8	13	18	4	9	14	19	5	10	15	1	6	11	16	2	7
41	60	79	98	13	18	4	9	14	19	5	10	15	1	6	11	16	2	7	12	17	3	8
42	61	80	99	14	19	5	10	15	1	6	11	16	2	7	12	17	3	8	13	18	4	9
43	62	81		15	1	6	11	16	2	7	12	17	3	8	13	18	4	9	14	19	5	10
44	63	82		16	2	7	12	17	3	8	13	18	4	9	14	19	5	10	15	1	6	11
45	64	83		17	3	8	13	18	4	9	14	19	5	10	15	1	6	11	16	2	7	12
46	65	84		18	4	9	14	19	5	10	15	1	6	11	16	2	7	12	17	3	8	13
47	66	85		19	5	10	15	1	6	11	16	2	7	12	17	3	8	13	18	4	9	14
48	67	86		1	6	11	16	2	7	12	17	3	8	13	18	4	9	14	19	5	10	15
49	68	87		2	7	12	17	3	8	13	18	4	9	14	19	5	10	15	1	6	11	16
50	69	88		3	8	13	18	4	9	14	19	5	10	15	1	6	11	16	2	7	12	17
51	70	89		4	9	14	19	5	10	15	1	6	11	16	2	7	12	17	3	8	13	18
52	71	90		5	10	15	1	6	11	16	2	7	12	17	3	8	13	18	4	9	14	19
53	72	91		6	11	16	2	7	12	17	3	8	13	18	4	9	14	19	5	10	15	1
54	73	92		7	12	17	3	8	13	18	4	9	14	19	5	10	15	1	6	11	16	2
55	74	93		8	13	18	4	9	14	19	5	10	15	1	6	11	16	2	7	12	17	3
56	75	94		9	14	19	5	10	15	1	6	11	16	2	7	12	17	3	8	13	18	4

Find the even Hundred at the top, the odd Year on the side; in the Place of meeting you'll find the Golden Number.

Example for the Year 1700. In the first Column at the Top, and in the next Line beneath it, and against the 0 in the side, I find 10, the Golden Number. You have the Golden Number for all these even Hundreds in the same Line, and for those odd Years in the side that are in that Line.

Example for 1734. I find 1700 at the Head, 34 on the Side, in that Column under 1700, and against 34 I find 6, the Golden Number. Note, The Golden Number is the same in both Accounts.

## The Julian Easter calculated for 100 Years.

Easter-day.	Easter-day.	Easter-day.	Easter-day.
1734 Apr. 14	1762 Apr. 7	1790 Mar. 24	1818 Apr. 14
1735 Apr. 6	1763 Mar. 23	1791 Apr. 13	1819 Apr. 6
1736 Apr. 25	1764 Apr. 11	1792 Apr. 4	1820 Mar. 28
1737 Apr. 10	1765 Apr. 3	1793 Apr. 24	1821 Apr. 10
1738 Apr. 2	1766 Apr. 23	1794 Apr. 9	1822 Apr. 2
1739 Apr. 22	1767 Apr. 8	1795 Apr. 1	1823 Apr. 22
1740 Apr. 6	1768 Mar. 30	1796 Apr. 20	1824 Apr. 6
1741 Mar. 29	1769 Apr. 19	1797 Apr. 5	1825 Mar. 29
1742 Apr. 18	1770 Apr. 4	1798 Mar. 28	1826 Apr. 18
1743 Apr. 3	1771 Mar. 27	1799 Apr. 17	1827 Apr. 3
1744 Mar. 25	1772 Apr. 15	1800 Apr. 8	1828 Mar. 25
1745 Apr. 14	1773 Mar. 31	1801 Mar. 24	1829 Apr. 14
1746 Mar. 30	1774 Apr. 6	1802 Apr. 13	1830 Apr. 2
1747 Apr. 19	1775 Apr. 12	1803 Apr. 5	1831 Apr. 19
1748 Apr. 10	1776 Apr. 3	1804 Apr. 24	1832 Apr. 10
1749 Mar. 26	1777 Apr. 16	1805 Apr. 9	1833 Apr. 2
1750 Apr. 15	1778 Apr. 8	1806 Apr. 1	
1751 Apr. 7	1779 Mar. 31	1807 Apr. 14	<i>You have no-</i>
1752 Mar. 29	1780 Apr. 19	1808 Apr. 5	<i>thing to do here</i>
1753 Apr. 11	1781 Apr. 4	1809 Mar. 28	<i>But to look for</i>
1754 Apr. 3	1782 Mar. 27	1810 Apr. 17	<i>the Year; and</i>
1755 Apr. 23	1783 Apr. 16	1811 Apr. 2	<i>In that Column</i>
1756 Apr. 14	1784 Mar. 31	1812 Apr. 21	<i>and Line</i>
1757 Mar. 30	1785 Apr. 20	1813 Apr. 13	<i>Easter-day you</i>
1758 Apr. 19	1786 Apr. 12	1814 Mar. 29	<i>will find.</i>
1759 Apr. 11	1787 Mar. 28	1815 Apr. 18	
1760 Mar. 26	1788 Apr. 16	1816 Apr. 9	
1761 Apr. 15	1789 Apr. 8	1817 Mar. 25	

The Gregorian Easter calculated for 100 Years.

Easter-Day.	Easter-Day.	Easter-Day.	Easter-Day.
1734 Apr. 25	1762 Apr. 11	1790 Apr. 4	1818 Mar. 22
1735 Apr. 10	1763 Apr. 3	1791 Apr. 24	1819 Apr. 11
1736 Apr. 1	1764 Apr. 22	1792 Apr. 15	1820 Apr. 2
1737 Apr. 21	1765 Apr. 7	1793 Mar. 31	1821 Apr. 22
1738 Apr. 6	1766 Mar. 30	1794 Apr. 20	1822 Apr. 7
1739 Mar. 29	1767 Apr. 19	1795 Apr. 12	1823 Mar. 30
1740 Apr. 17	1768 Apr. 3	1796 Mar. 27	1824 Apr. 18
1741 Apr. 2	1769 Mar. 26	1797 Apr. 16	1825 Apr. 3
1742 Mar. 25	1770 Apr. 15	1798 Apr. 8	1826 Mar. 26
1743 Apr. 14	1771 Mar. 31	1799 Mar. 24	1827 Apr. 15
1744 Apr. 5	1772 Apr. 19	1800 Apr. 13	1828 Apr. 6
1745 Apr. 18	1773 Apr. 11	1801 Apr. 5	1829 Apr. 19
1746 Apr. 10	1774 Apr. 3	1802 Apr. 18	1830 Apr. 11
1747 Apr. 2	1775 Apr. 16	1803 Apr. 10	1831 Apr. 3
1748 Apr. 14	1776 Apr. 7	1804 Apr. 1	1832 Apr. 22
1749 Apr. 6	1777 Mar. 30	1805 Apr. 14	1833 Apr. 7
1750 Mar. 29	1778 Apr. 19	1806 Apr. 6	
1751 Apr. 11	1779 Apr. 4	1807 Mar. 29	<i>You have no-</i>
1752 Apr. 2	1780 Mar. 26	1808 Apr. 17	<i>thing to do</i>
1753 Apr. 22	1781 Apr. 15	1809 Apr. 2	<i>here,</i>
1754 Apr. 14	1782 Apr. 7	1810 Apr. 22	<i>But to look</i>
1755 Mar. 30	1783 Mar. 23	1811 Apr. 14	<i>for the Year.</i>
1756 Apr. 18	1784 Apr. 11	1812 Mar. 29	<i>In that Co-</i>
1757 Apr. 10	1785 Mar. 27	1813 Apr. 18	<i>lumn and Line</i>
1758 Mar. 26	1786 Apr. 16	1814 Apr. 10	<i>Easter - Day</i>
1759 Apr. 15	1787 Apr. 8	1815 Mar. 26	<i>you will find.</i>
1760 Apr. 6	1788 Mar. 30	1816 Apr. 14	
1761 Mar. 22	1789 Apr. 12	1817 Apr. 6	

A Table, shewing what Days in these Months are equal to each other; and may serve for all the Months in the Year.

March		April		Febru	
Julian	Gregorian	Julian	Gregorian	Julian	Gregorian
1	12	1	12	1	12
2	13	2	13	2	13
3	14	3	14	3	14
4	15	4	15	4	15
5	16	5	16	5	16
6	17	6	17	6	17
7	18	7	18	7	18
8	19	8	19	8	19
9	20	9	20	9	20
10	21	10	21	10	21
11	22	11	22	11	22
12	23	12	23	12	23
13	24	13	24	13	24
14	25	14	25	14	25
15	26	15	26	15	26
16	27	16	27	16	27
17	28	17	28	17	28
18	29	18	29	18	29
19	30	19	30	19	20
20	31	20	1	20	30
21	1	21	2	21	31
22	2	22	3	22	1
23	3	28	4	23	2
24	4	24	5	24	3
25	5	25	6	24	4
26	6	26	7	26	5
27	7	27	8	27	6
28	8	28	9	28	7
29	9	29	10	or	8
30	10	30	11	29	9
31	11				10

*Example 1.* I demand, what Day of the *British* Month the *Roman* Easter falls on in the Year 1734? Now, I look for the *Gregorian*, or *Roman* Easter in the Table, Page 15; and finding it to be the 25th of *April*, according to their Account; I look in this Table for the 25th of the *Gregorian* *April*; and against it I find the 14th of the *Julian* *April*, which answers the Question.

Now, finding the *Julian* or *British* Easter to be on the 14th of *April*, I conclude, both *Easters* fall on the very same Day: And the Year 1733, they fell on the same Day, theirs the 5th of *April*, and ours the 25th of *March*.

*Example 2*, for 1739. The *Roman* Easter falls on the 29th of *March*, equal to the 18th of the *British* *March*; the *British* Easter on the 22d of *April*, equal to the 3d of the *Roman* *May*.

The first two Columns serve for all the Months that have 31 Days, the 2d for those Months that have but 30, and *Febr.* for it self, in Leap Year, 29.

As the first of our Month is equal to their 12th, so must the 11th of their following Month be equal to the last of our Month.

The Year 1800, the first of the *Julian* Month will be equal to the 13th of the *Gregorian*. The Year 1900, our first, will be equal to their 14th, &c.

... ..

No.	Date	Particulars	Debit	Credit	Balance
1	1797	...	...	...	...
2	1797	...	...	...	...
3	1797	...	...	...	...
4	1797	...	...	...	...
5	1797	...	...	...	...
6	1797	...	...	...	...
7	1797	...	...	...	...
8	1797	...	...	...	...
9	1797	...	...	...	...
10	1797	...	...	...	...
11	1797	...	...	...	...
12	1797	...	...	...	...
13	1797	...	...	...	...
14	1797	...	...	...	...
15	1797	...	...	...	...
16	1797	...	...	...	...
17	1797	...	...	...	...
18	1797	...	...	...	...
19	1797	...	...	...	...
20	1797	...	...	...	...
21	1797	...	...	...	...
22	1797	...	...	...	...
23	1797	...	...	...	...
24	1797	...	...	...	...
25	1797	...	...	...	...
26	1797	...	...	...	...
27	1797	...	...	...	...
28	1797	...	...	...	...
29	1797	...	...	...	...
30	1797	...	...	...	...
31	1797	...	...	...	...
32	1797	...	...	...	...
33	1797	...	...	...	...
34	1797	...	...	...	...
35	1797	...	...	...	...
36	1797	...	...	...	...
37	1797	...	...	...	...
38	1797	...	...	...	...
39	1797	...	...	...	...
40	1797	...	...	...	...
41	1797	...	...	...	...
42	1797	...	...	...	...
43	1797	...	...	...	...
44	1797	...	...	...	...
45	1797	...	...	...	...
46	1797	...	...	...	...
47	1797	...	...	...	...
48	1797	...	...	...	...
49	1797	...	...	...	...
50	1797	...	...	...	...
51	1797	...	...	...	...
52	1797	...	...	...	...
53	1797	...	...	...	...
54	1797	...	...	...	...
55	1797	...	...	...	...
56	1797	...	...	...	...
57	1797	...	...	...	...
58	1797	...	...	...	...
59	1797	...	...	...	...
60	1797	...	...	...	...
61	1797	...	...	...	...
62	1797	...	...	...	...
63	1797	...	...	...	...
64	1797	...	...	...	...
65	1797	...	...	...	...
66	1797	...	...	...	...
67	1797	...	...	...	...
68	1797	...	...	...	...
69	1797	...	...	...	...
70	1797	...	...	...	...
71	1797	...	...	...	...
72	1797	...	...	...	...
73	1797	...	...	...	...
74	1797	...	...	...	...
75	1797	...	...	...	...
76	1797	...	...	...	...
77	1797	...	...	...	...
78	1797	...	...	...	...
79	1797	...	...	...	...
80	1797	...	...	...	...
81	1797	...	...	...	...
82	1797	...	...	...	...
83	1797	...	...	...	...
84	1797	...	...	...	...
85	1797	...	...	...	...
86	1797	...	...	...	...
87	1797	...	...	...	...
88	1797	...	...	...	...
89	1797	...	...	...	...
90	1797	...	...	...	...
91	1797	...	...	...	...
92	1797	...	...	...	...
93	1797	...	...	...	...
94	1797	...	...	...	...
95	1797	...	...	...	...
96	1797	...	...	...	...
97	1797	...	...	...	...
98	1797	...	...	...	...
99	1797	...	...	...	...
100	1797	...	...	...	...

## A Perpetual Table to find the Moveable Feasts in both Accounts.

N <sup>o</sup> . Day.	Shrove Sunday.	Shrove Sunday in Leap Year.	Mid Lent Sunday.	Easter-Day.	Rogat. Sunday.	Ascens Day.	Whit-Sunday.	Trinity-Sunday.	Advent-Sunday.
1	Feb. 1	Feb. 2	Mar 1	Mar 22	Apr. 25	Apr. 30	May 10	May 17	Nov 29
2	2	3	2	23	27	May 1	11	18	30
3	3	4	3	24	28	2	12	19	Dec. 1
4	4	5	4	25	29	3	13	20	2
5	5	6	5	26	30	4	14	21	3
6	6	7	6	27	May 1	5	15	22	Nov 27
7	7	8	7	28	2	6	16	23	28
8	8	9	8	29	3	7	17	24	29
9	9	10	9	30	4	8	18	25	30
10	10	11	10	31	5	9	19	26	Dec. 1
11	11	12	11	April 1	6	10	20	27	2
12	12	13	12	2	7	11	21	28	3
13	13	14	13	3	8	12	22	29	Nov 27
14	14	15	14	4	9	13	23	30	28
15	15	16	15	5	10	14	24	31	29
16	16	17	16	6	11	15	25	June 1	30
17	17	18	17	7	12	16	26	2	Dec. 1
18	18	19	18	8	13	17	27	3	2
19	19	20	19	9	14	18	28	4	3
20	20	21	20	10	15	19	29	5	Nov 27
21	21	22	21	11	16	20	30	6	28
22	22	23	22	12	17	21	31	7	29
23	23	24	23	13	18	22	June 1	8	30
24	24	25	24	14	19	23	2	9	Dec. 1
25	25	26	25	15	20	24	3	10	2
26	26	27	26	16	21	25	4	11	3
27	27	28	27	17	22	26	5	12	Nov 27
28	28	29	28	18	23	27	6	13	28
29	Mar 1		29	19	24	28	7	14	29
30	2		30	20	25	29	8	15	30
31	3		31	21	26	30	9	16	Dec. 1
32	4	Apr. 1		22	27	31	10	17	2
33	5		2	23	28	June 1	11	18	3
34	6		3	24	29	2	12	19	Nov 27
35	7		4	25	30	3	13	20	28

*The Explanation of the preceding Table.*

**T**O find the Moveable Feasts and Fasts, enter the Table with either Easter, or the Number of Direction, which you like best; and in that Line you have the Moveable Feasts for any Year propos'd.

Example 1. I look for Easter in the Table, Page 14, for the Year 1734; and I find it to be the 14<sup>th</sup> of April. Now I look for the Title *Easter* at the Top of this Table; and guiding my Eye down that Column till I come to *April 14*, in a Line to the Right and Left, I have all the Moveable Feasts and Fasts at one View, *Mid-Lent Sunday, Mar. 24*; *Shrove-Sunday Feb. 24*; *Rogation Sunday, May 19*; *Ascension-Day, May 23*; and so thro'.

Example 2. I look for the Number of Direction for the Year 1800: In the Table, Page 21, I find it to be 13. I enter the Table with 13 in the first Column on the Left hand; and it being Leap-Year, I look for *Shrove-Sunday* in the second large Column, and find it to be *Feb. 19*, *Mid-Lent Sunday, Mar. 18*; *Easter-Day, Apr. 18*.

*To find the Roman Feasts.*

**F**ind the *Gregorian* Easter, or Number of Direction. Enter this Table with either of them, after the same manner as before mention'd, and you have your desire. The *Roman* Easter for 1734, falls on *Apr. 25*, *Middle Lent Sunday, Apr. 4*; *Shrove-Sunday, Mar. 7*, &c. *Shrove-Tuesday*, the next after *Shrove-Sunday*; *First Day of Lent*, next *Wednesday* after, commonly call'd *Asb-Wednesday*.

*The Explanation of the following Table.*

**F**IRST, find the Dominical Letter, and the Golden Number for the Year propos'd; then enter the Table with the Golden Number on the Left hand Side, and the Dominical Letter at the Top; in the Place of meeting you have the Number of Direction.

Example 1, for 1734. In the Table, Page 7, I find the Dominical Letter is *F*: In the Table, Page 13, I look for the Golden Number, which is 6. Now, I seek for 6 to the first Column of this Table, and *F* at the Head; in the Angle of meeting I find 24, the Number of Direction for that Year.

Example 2, for 1700. The Dominical Letters are *G F*; (Observe, you must never use the Letter to the Left hand to this Table,) the Golden Number 10. Now, from 10 in this Table, guide your Eye till you come under *F*; and there you will find 10, the Number of Direction; and this Number directs you to the Movable Feasts in the Table, Page 18, the said Year 1700.

Example 3, for 1815, *C* the Dominical Letter, 11 the Golden Number; by which I discover the Number of Direction to be 28; with this 28 I enter the Table for the Movable Feasts and Fasts; which shews me, that *Shrove-Sunday* falls on *Feb. 28*, *Middle Lent Sunday* *Mar. 28*, *Easter-Day* *Apr. 18*, *Rogation-Sunday* *May 23*, *Ascension-day, or Holy Thursday* *May 27*, *Whit-Sunday* *June 6*, *Trinity-Sunday* *June 13*, *Advent-Sunday* *November 28*.



A Table to find the Julian Number of Direction for ever; by which may be found the Movable Feasts.

Find the Golden Number for any Year, And againſt it the Epact will appear.

Golden Number.	A	B	C	D	E	F	G	Golden Number.	Epact.
1	19	20	21	22	16	17	18	1	11
2	5	6	7	8	9	10	11	2	22
3	26	27	28	29	30	24	25	3	3
4	19	13	14	15	16	17	18	4	14
5	5	6	7	8	2	3	4	5	25
6	26	27	21	22	23	24	25	6	6
7	12	13	14	15	16	10	11	7	17
8	33	34	35	29	30	31	32	8	28
9	19	20	21	22	23	24	18	9	9
10	12	13	7	8	9	10	11	10	20
11	26	27	28	29	30	31	32	11	1
12	19	20	21	15	16	17	18	12	12
13	5	6	7	7	9	10	4	13	23
14	26	27	28	29	23	24	25	14	4
15	12	13	14	15	16	17	18	15	15
16	5	6	7	1	2	3	4	16	26
17	26	20	21	22	23	24	25	17	7
18	12	13	14	15	9	10	11	18	18
19	33	34	28	29	30	31	32	19	29

Another way of finding *Easter* by the Number of Direction: If this Number be 10, or under 10, *Easter* falls in *March*; if 11, or above, in *April*; and if in *April*, subtract 10, the Remainder gives *Easter-Day* in *April*; but if in *March*, add 21, the Sum will give *Easter-Day* in *March*. And contrary; you may find the Number of Direction by *Easter*; if in *March*, by subtracting 21; if in *April*, by adding 10.

Golden Number.

A Perpetual Table to find the Gregorian Number of Direction

	A	B	C	D	E	F	G
1	26	27	28	29	30	24	25
2	19	13	14	15	16	17	18
3	5	6	7	8	9	10	4
4	26	27	21	22	23	24	25
5	12	13	14	15	16	10	11
6	33	34	35	29	30	31	32
7	19	20	21	22	23	24	25
8	12	13	7	8	9	10	11
9	26	27	28	29	30	31	32
10	19	20	21	22	16	17	18
11	5	6	7	8	9	10	11
12	26	27	28	29	23	24	25
13	12	13	14	15	16	17	18
14	5	6	7	1	2	3	4
15	26	20	21	22	23	24	25
16	12	13	14	15	16	17	11
17	33	34	28	29	30	31	32
18	19	20	21	22	23	17	18
19	12	6	7	8	9	10	11

This Foreign Number of Direction is found by the same Rules above-mentioned, with this only difference, that it must be done with the Gregorian Letter: For the Golden Number is the same for both Accounts.

For Example: CB being the Dominical Letters for 1740, and the Golden Number 12, I look for 12 in the first Column, and for B at the Top, and in the Place of meeting I find 27, the Number of Direction for the Year 1740.

Note, if there be two Dominical Letters, you must always use that to the right Hand to this Table.

The Year 1754, the Number of Direction is 24; from which I subtract 10, to find Easter-Day in April.

The Year 1771, the Number of Direction is 10; to which I add 21. See the Work: The Reverse of these Examples shews the Number of Direction, as I mention'd before.

Direction	24	Year 1754
Subtract	10	
Remains	14	Easter April.
<hr/>		
Direction	10	Year 1771
Add	21	
The Sum	31	Easter March.

Add 10 to 14, gives 24. Subtract 21 from 31, and remains 10, the Number of Direction.

The Gregorian E P A C T.

You'll find the odd Year under here.					1700	1800	1900	2000	2100	2200	2300	2400	2500	
0	19	38	57	76	95	9	3	28	23	17	11	6	1	25
1	20	39	58	77	96	20	14	9	4	28	22	17	12	6
2	21	40	59	78	97	1	25	20	15	9	3	28	23	17
3	22	41	60	79	98	12	6	1	26	20	14	9	4	28
4	23	42	61	80	99	23	17	12	7	1	25	20	15	9
5	24	43	62	81		4	28	23	18	12	6	1	26	20
6	25	44	63	82		15	9	4	29	23	17	12	7	1
7	26	45	64	83		26	20	15	11	4	28	23	18	12
8	27	46	65	84		7	1	26	22	15	9	4	29	23
9	28	47	66	85		18	12	7	3	26	20	55	11	4
10	29	48	67	86		29	23	18	14	7	1	26	22	15
11	30	49	68	87		11	4	29	25	18	12	7	3	26
12	31	50	69	88		22	15	11	6	29	23	18	14	7
13	32	51	70	89		3	26	22	17	11	4	29	25	18
14	33	52	71	90		14	7	3	28	22	15	11	6	29
15	34	53	72	91		25	18	14	9	3	26	22	17	11
16	35	54	73	92		6	29	25	20	14	7	3	28	22
17	36	55	74	93		17	11	6	1	25	18	14	9	3
18	37	56	75	94		28	22	17	12	6	29	25	20	14

Look for the even Hundreds at the Top, and the odd Year in the Left hand Side, and in the Angle of meeting you have the Epact.

Example for the Year 1734. I find 1700 at the Top, 34 in the Side; I guide my Eye to the Right hand, till I come under 1700, and there I find 25, the Epact for the said Year, 18 for 1834.

For the even Hundreds you have the Epacts in the uppermost Line beneath them; and against the 0 in the Side; 9 for 1700, 3 for 1800, 28 for 1900; 9 is the Epact for 1719. All these odd Years in that Line have their respective Epacts against them.

*The Terms and their Returns.*


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Hillary-Term begins *Jan. 23*, and ends *Feb. 12*.

And	1		<i>January 20</i>		Observe, each Return contains as many Days as there are Re- turns in the Term.
has	2		<i>January 27</i>		
Four	3		<i>February 3</i>		
Returns.	4		<i>February 9</i>		

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Easter-Term begins the *Wednesday-Fortnight* after *Easter*, and ends on *Monday* after *Ascension-day*. Each Return continues Five Days.

And	1		<i>15 Days</i> after <i>Easter</i> .
has	2		<i>3 Weeks</i> after <i>Easter</i> .
Five	3		<i>1 Month</i> after <i>Easter</i> .
Returns.	4		<i>5 Weeks</i> after <i>Easter</i> .
	5		<i>The Day</i> after <i>Ascension-Day</i> .

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Trinity-Term begins on *Friday* after *Trinity-Sunday*, and ends the *Wednesday-Fortnight* after. Each Return continues Four Days.

And	1		<i>The Monday</i> after <i>Trinity-Sunday</i> .
has	2		<i>8 Days</i> after <i>Trinity-Sunday</i> .
Four	3		<i>15 Days</i> after <i>Trinity-Sunday</i> .
Returns	4		<i>3 Weeks</i> after <i>Trinity-Sunday</i> .

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Michaelmas-Term begins *Octob. 23*, and ends *Novemb. 28*,

	1		<i>October 20</i>		These Return-Days are set apart for the several parts of Proceedings in any Cause to be determined.
And	2		<i>October 29</i>		
has	3		<i>November 4</i>		
Six	4		<i>November 12</i>		
Returns.	5		<i>November 18</i>		
	6		<i>November 25</i>		

*The Law has Turns, and Returns many,  
Or Right, or Wrong, to get a Penny.*

The Fixed Feasts and Fasts.

Circumcision, or New Year's Day,	Jan. 1
Epiphany, or Twelfth Day,	Jan. 6
Conversion of St. Paul,	Jan. 25
Martyrdom of King Charles the First	Jan. 30
Purification of the V. Mary, or Candlemas-Day,	Feb. 2
St. Matthias (in Leap-Year 25)	Feb. 24
Lady-Day, or Annunciation of the V. Mary,	Mar. 25
St. Mark the Evangelist,	Apr. 25
St. Philip and Jacob, or May Day,	May 1
The Birth and Return of King Charles II.	May 29
St. Barnabas the Apostle.	June 11
St. John the Baptist, or Midsummer-Day,	June 24
St. Peter the Apostle,	June 29
St. James the Apostle,	July 25
St. Bartholomew the Apostle,	Aug. 24
St. Matthew the Apostle,	Sept. 21
Michaelmas, or St. Michael the Arch-angel,	Sept. 29
St. Luke the Evangelist,	Oct. 18
St. Simon and Jude,	Oct. 28
All Saints,	Nov. 1
Gun-Powder-Treason,	Nov. 5
St. Andrew the Apostle,	Nov. 30
St. Thomas the Apostle,	Dec. 21
Christmas; or the Nativity of our Lord,	Dec. 25
St. Stephen the Proto-Martyr,	Dec. 26
St. John the Evangelist,	Dec. 27
Innocents,	Dec. 28

There are four Weeks in the Year, call'd *Ember Weeks*; the first Week in Lent, the next after Whit-Sunday, the 14th of September, and the 13th of December, Passion-Week, the Week before Easter, Passion-Sunday, the second Sunday before Easter, Palm-Sunday, the first before Easter, Low-Sunday, the first after Easter, *Corpus Christi*, Thursday after Trinity-Sunday.

## Remarkable D A T S.

<b>K</b> ing George the Second Born Oct. 30,	1783
Queen Caroline Born March 1,	1782,3
The Prince of Wales Born Jan. 20,	1706
Princess Anne Born Oct. 22,	1709
Princess Amalia Born May 30,	1711
Princess Carolina Born May 30,	1713
Prince William Born Apr. 15,	1721
Princess Mary Born Feb. 22,	1722
Princess Louisa Born Dec. 7.	1724
Hillary, — — — —	Jan. 13.
Valentine, — — — —	Feb. 14.
David, or the Welch Champion,	Mar. 1.
Equal Day and Night, — — — —	Mar. 9.
Patrick, or the Irish Champion,	Mar. 17.
George, or the English Champion,	Apr. 23.
Longest Day, or St. Barnabas, — — — —	June 11
Election of Sheriffs in London,	June 24.
Swithln, — — — —	July 15.
Dog-days begin, — — — —	July 19.
Lammas, — — — —	Aug. 1.
Dog-days end, — — — —	Aug. 29.
Equal Day and Night, — — — —	Sept. 12.
Sheriffs of London sworn,	Sept. 28.
Election of the Lord Mayor of London,	Sept. 29.
Lord Mayor's Day, when sworn at Westminster,	Oct. 29.
St. Martin, — — — —	Nov. 11.
Shortest Day, — — — —	Dec. 11.

## The Scotch T E R M S.

Candlemas-Term Begins Jan. 23. Ends Feb. 12. Whitsun-tide-Term Begins May 25. Ends June 15. Lammas-Term Begins July 20, Ends Aug. 8. Martinmas-Term Begins Nov. 3. Ends Nov. 29.

The Irish Terms are the same as Westminster-Terms, except that Michaelmas-Term, which begins Oct. 13. adjourns to Nov. 3. and from thence to the 6th. It hath 7 Returns.

The

*The Explanation of the Table of the Sun's Declination,  
Rising and Setting.*

**F**OR the Sun's Declination, find the Month at the Top, the Day of the Month in the Side; and in that Column, under the Month, and against the Day, you have the Sun's Declination North, or South.

For Example; *January 1*, the Sun's Declination is 21 Degrees, 41 Minutes South; *Feb. 1*, 13-42; *Mar. 1*, 3-19. Example 2. I desire to know the Sun's Declination the 10th of *March*. I look for *March* at the Top, for the Day in the Side; and in the Place of meeting I find 0 N. 14, or 14 Minutes North Declination.

*The Explanation of the Sun's Rising and Setting at  
London, &c.*

Guide your Eye from the Day in the Side, till you come to that Column under the Month you reckon in, and there you have the Hour and Minute of the Sun's Rising and Setting. Example 1. I look for the first day of *January*, and against it I find 8 and 4, the Sun's Rising and Setting. The 9th of *March* the Sun rises at 6, and sets at 6: The 15th of *Jan.* the Sun rises 40 Minutes after 7, sets 20 Minutes after 4: The 11th of *December* the Sun rises 13 Minutes after 8, sets 47 Minutes after 3. It is needless to give any Examples of the Sun's rising and setting at *Edinburgh*; because it's found after the same method. For the other Places following, you are only to look for the Name of the Place at the Top, for the Month and the Day in the Side, and in the Place of meeting you have the Sun's rising and setting the 10th day of every Month in the Year: The 10th day of *June* the Sun rises at *Archan-gel* 37 Minutes after 1, sets 23 Minutes after 10; at *Constantinople*, the Sun rises 26 Minutes after 4, and sets 34 Minutes after 7, &c.

A Table of the Sun's Declination.

Days.	Jan.		Febr.		March.		April		May.		June.	
	D.	M.	D.	M.	D.	M.	D.	M.	D.	M.	D.	M.
1	21	S.41	13	S.42	3	S. 19	8	N 40	18	N 8	23	N.12
2		30		22	2	56	9	1		23		16
3		20		1		32		23		38		19
4		10	12	41		9		45		52		22
5	20	58		20	1	45	10	6	19	6		25
6		45	11	59		21		27		20		26
7		34		38	0	57		49		34		28
8		21		17		34	11	9		46		28
9		8	10	55		10		30		59		29
10	19	55		34	0	N. 14		50	20	11		29
11		42		12		37	12	10		24		29
12		27	9	59	11	11		30		35		28
13		14		28		25		51		46		28
14	18	59		6		47	13	10		58		27
15		44	8	43	2	11		29	21	8		26
16		28		21		35		47		19		24
17		13	7	58		58	14	8		29		21
18	17	57		35	3	22		26		38		18
19		41		12		45		46		47		19
20		24	6	49	4	8	15	4		56		18
21		6		26		31		21	22	4		7
22	16	49		3		55		40		13		3
23		32	5	40	5	18		57		20	22	57
24		14		17		40	16	15		27		52
25	15	56	4	53	6	4		32		34		47
26		37		30		26		48		41		41
27		19		7		48	17	5		47		34
28		00	3	43	7	11		21		53		25
29	14	41				33		37		58		20
30		21				55		53	23	3		12
31		2			8	17				7		



The Sun's Declination continu'd.

Days	July.		August		Sept.		Octob.		Nov.		Dec.	
	D.	M.	D.	M.	D.	M.	M.	D.	D.	M.	D.	M.
1	22	N. 4	15	N. 5	4	N. 17	7	S. 22	17	S. 44	23	N. 8
2	21	55	14	47	3	54		44	18	1		12
3		46		29		31	8	7		16		16
4		37		10		8		29		32		20
5		26	13	52	2	45		51		47		23
6		17		32		20	9	14	19	1		25
7		7		12	1	57		36		16		27
8	20	57	12	52		35		58		30		28
9		46		33		10	10	19		44		29
10		34		14	0	47		41		57		29
11		23	11	54		23	11	2	20	11		29
12		11		34	0	S. 0		23		23		28
13	19	58		13		24		45		36		27
14		45	10	53		47	12	5		48		26
15		33		21	1	11		26		59		25
16		19		10		34		47	21	16		24
17		5	9	49		56	13	7		21		20
18	18	52		27	2	20		27		32		17
19		37		6		45		48		42		15
20		23	8	45	3	8	14	7		51		10
21		8		23		30		26	22	1		5
22	17	53		2		53		45		9		0
23		37	7	39	4	18	15	4		18	22	55
24		21		17		41		23		26		49
25		5	6	55	5	5		42		33		41
26	16	49		32		27	16	0		40		35
27		32		10		50		18		46		27
28		15	5	47	6	13		35		53		19
29	15	58		24		36		53		58		11
30		41		3		59	17	10	23	3		2
31		23	4	40				27			21	53

*A Perpetual Table of the Sun's Rising and Setting at  
London, Amsterdam, Hanover, Antwerp, Berlin,  
Ostend and Warlaw.*

Days.	January.				February.				March.				April.			
	Sun r.		Sun s.		Sun r.		Sun s.		Sun r.		Sun s.		Sun r.		Sun s.	
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.
1	8	0	4	0	7	11	4	49	6	17	5	43	5	16	6	44
2	7	59	4	1	7	9	4	51	6	14	5	46	5	14	6	46
3	7	57	4	3	7	7	4	52	6	12	5	48	5	12	6	48
4	7	56	4	4	7	6	4	54	6	10	5	50	5	10	6	50
5	7	55	4	5	7	4	4	56	6	8	5	52	5	8	6	52
6	7	54	4	6	7	2	4	58	6	6	5	54	5	7	6	53
7	7	53	4	7	7	0	5	0	6	4	5	56	5	5	6	55
8	7	51	4	9	6	58	5	2	6	2	5	58	5	3	6	57
9	7	49	4	11	6	56	5	4	6	0	6	0	5	1	6	59
10	7	48	4	12	6	54	5	6	5	58	6	2	5	0	7	0
11	7	47	4	13	6	52	5	8	5	56	6	4	4	58	7	2
12	7	46	4	14	6	50	5	10	5	54	6	6	4	26	7	4
13	7	44	4	16	6	48	5	12	5	53	5	7	4	54	7	6
14	7	42	4	18	6	46	5	14	5	51	6	9	4	52	7	8
15	7	40	4	20	6	44	5	16	5	49	6	11	4	50	7	10
16	7	39	4	21	6	42	5	18	5	47	6	13	4	48	7	12
17	7	37	4	23	6	40	5	20	5	45	6	15	4	46	7	14
18	7	36	4	24	6	38	5	22	5	43	6	17	4	44	7	16
19	7	34	4	26	6	36	5	24	5	41	6	19	4	42	7	18
20	7	33	4	27	6	34	5	26	5	39	6	21	4	40	7	20
21	7	31	4	29	6	32	5	28	5	37	6	23	4	39	7	21
22	7	29	4	31	6	30	5	30	5	35	6	25	4	37	7	23
23	7	27	4	33	6	28	5	32	5	33	6	27	4	35	7	25
24	7	25	4	35	6	26	5	34	5	31	6	29	4	33	7	26
25	7	24	4	36	6	24	5	36	5	29	6	31	4	32	7	28
26	7	22	4	38	6	22	5	38	5	27	6	33	4	31	7	29
27	7	20	4	40	6	20	5	40	5	25	6	35	4	29	7	31
28	7	19	4	41	6	18	5	42	5	23	6	37	4	27	7	33
29	7	17	4	43					5	21	6	39	4	25	7	35
30	7	15	4	45					5	19	6	41	4	24	7	36
31	7	13	4	47					5	17	6	43		7		

The Table of the Sun's Rising and Setting at London, Amsterdam, Hanover, Antwerp, Berlin, Ostend and Warfaw, continu'd.

Days.	May.		June.		July.		August.	
	Sun r.	Sun l.	Sun r.	Sun l.	Sun r.	Sun l.	Sun r.	Sun l.
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
1	4 23	7 37	3 49	8 11	3 57	8 3	4 41	7 19
2	4 21	7 39	3 49	8 11	3 58	8 2	4 42	7 18
3	4 19	7 41	3 48	8 12	3 59	8 1	4 43	7 17
4	4 18	7 42	3 48	8 12	4 0	8 0	4 45	7 15
5	4 16	7 44	3 48	8 12	4 1	7 59	4 47	7 13
6	4 15	7 45	3 48	8 12	4 3	7 57	4 49	7 11
7	4 14	7 46	3 48	8 12	4 4	7 56	4 51	7 9
8	4 12	7 48	3 47	8 13	4 5	7 55	4 52	7 8
9	4 10	7 50	3 47	8 13	4 7	7 53	4 54	7 6
10	4 9	7 51	3 47	8 13	4 8	7 52	4 56	7 4
11	4 8	7 52	3 47	8 13	4 9	7 51	4 58	7 2
12	4 7	7 53	3 47	8 13	4 10	7 50	5 0	7 0
13	4 6	7 54	3 47	8 13	4 11	7 49	5 2	6 58
14	4 5	7 55	3 47	8 13	4 13	7 47	5 4	6 56
15	4 4	7 56	3 48	8 12	4 15	7 45	5 6	6 54
16	4 3	7 57	3 48	8 12	4 16	7 44	5 8	6 52
17	4 2	7 58	3 48	8 12	4 17	7 43	5 10	6 50
18	4 1	7 59	3 49	8 11	4 18	7 42	5 12	6 48
19	3 59	8 1	3 49	8 11	4 20	7 40	5 13	6 47
20	3 58	8 2	3 49	8 11	4 21	7 39	5 15	6 45
21	8 57	8 3	3 50	8 10	4 23	7 37	5 17	6 43
22	3 56	8 4	3 50	8 10	4 24	7 36	5 19	6 41
23	3 55	8 5	3 51	8 9	4 26	7 34	5 21	6 39
24	3 54	8 6	3 51	8 9	4 27	7 33	5 23	6 37
25	3 54	8 6	3 52	8 8	4 29	7 31	5 24	6 36
26	3 53	8 7	3 52	8 8	4 30	7 30	5 26	6 34
27	2 52	8 8	3 53	8 7	4 32	7 28	5 28	6 32
28	3 51	8 9	3 54	8 6	4 34	7 26	5 30	6 30
29	3 50	8 10	3 55	8 5	4 35	7 25	5 32	6 28
30	3 50	8 10	3 56	8 4	4 37	7 23	5 34	6 26
31	3 49	8 11			4 39	7 21	5 36	6 24

The Table of the Sun's Rising and Setting at London, Amsterdam, Hanover, Antwerp, Berlin, Ostend, and Warsaw, continu'd.

Days.	September.				October.				November.				December.			
	Sun r.		Sun f.		Sun r.		Sun f.		Sun r.		Sun f.		Sun r.		Sun f.	
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.
1	5	38	6	22	6	37	5	23	7	35	4	25	8	10	3	5h
2	5	40	6	20	6	39	5	21	7	36	4	24	8	10	3	50
3	5	42	6	18	6	41	5	19	7	37	4	23	8	11	3	49
4	5	44	6	16	6	43	5	17	7	38	4	22	8	11	3	49
5	5	46	6	14	6	45	5	15	7	40	4	20	8	11	3	49
6	5	48	6	12	6	47	5	13	7	42	4	18	8	12	3	48
7	5	50	6	10	6	49	5	11	7	44	4	16	8	12	3	48
8	5	52	5	8	6	51	5	9	7	45	4	15	8	12	3	48
9	5	54	6	6	6	53	5	7	7	47	4	13	8	13	3	47
10	5	56	6	4	6	55	5	5	7	49	4	11	8	13	3	47
11	5	58	6	2	6	57	5	3	7	50	4	10	8	13	3	47
12	6	0	6	0	6	59	5	1	7	51	4	9	8	13	3	47
13	6	2	5	58	7	1	4	59	7	53	4	7	8	13	3	47
14	6	4	5	56	7	2	4	58	7	54	4	6	8	12	3	48
15	6	6	5	54	7	4	4	56	7	56	4	4	8	12	3	48
16	6	8	5	52	7	6	4	54	7	57	4	3	8	12	3	48
17	6	10	5	50	7	8	4	52	7	58	4	2	8	11	3	49
18	6	12	5	48	7	10	4	50	7	59	4	1	8	11	3	49
19	8	14	5	46	7	12	4	48	8	0	4	0	8	10	3	50
20	6	16	5	44	7	14	4	46	8	1	3	59	8	10	3	50
21	6	18	5	42	7	16	4	44	8	2	3	58	8	9	3	51
22	6	20	5	40	7	18	4	42	8	3	3	57	8	8	3	52
23	6	22	5	38	7	20	4	40	8	4	3	56	8	7	3	53
24	6	24	5	36	7	22	4	38	8	5	3	55	8	6	3	54
25	6	26	5	34	7	23	4	37	8	6	3	54	8	6	3	54
26	6	27	5	33	7	24	4	36	8	7	3	53	8	5	3	55
27	6	29	5	31	7	26	4	34	8	8	3	52	8	4	3	56
28	6	31	5	29	7	28	4	32	8	9	3	51	8	3	3	57
29	6	33	5	27	7	30	4	30	8	9	3	51	8	2	3	58
30	6	35	5	25	7	31	4	29	8	10	3	50	8	2	3	58
31					7	33	4	27					8	1	3	59

A Perpetual Table of the Sun's Rising and Setting at Edinburgh, Inverara, Copenhagen and Moscow.

Days.	January.				February.				March.				April.			
	Sun r.		Sun s.		Sun r.		Sun s.		Sun r.		Sun s.		Sun r.		Sun s.	
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.
1	8	25	3	35	7	25	4	35	6	20	5	40	5	8	6	52
2	8	24	3	36	7	23	4	37	6	18	5	41	5	6	6	54
3	8	22	3	38	7	21	4	39	6	15	5	45	5	4	6	56
4	8	21	3	39	7	18	4	42	6	13	5	47	5	1	6	59
5	8	19	3	41	7	16	4	44	6	11	5	49	4	5	7	2
6	8	18	3	42	7	14	4	46	6	8	5	52	4	5	7	4
7	8	16	3	44	7	11	4	49	6	6	5	54	4	5	7	6
8	8	15	3	45	7	9	4	51	6	3	5	57	4	5	7	9
9	8	13	3	47	7	7	4	53	6	0	6	0	4	4	7	11
10	8	11	3	49	7	5	4	55	5	5	6	2	4	4	7	13
11	8	9	3	51	7	3	4	57	5	5	6	4	4	4	7	15
12	8	7	3	53	7	0	5	0	5	5	6	7	4	4	7	18
13	8	5	3	55	6	58	5	2	5	5	6	9	4	4	7	20
14	8	3	3	57	6	55	5	5	5	4	6	12	4	3	7	22
15	8	1	3	59	6	52	5	7	5	4	6	14	4	3	7	24
16	7	59	4	1	6	5	5	9	5	44	6	16	4	3	7	26
17	7	57	4	3	6	4	5	12	5	41	6	19	4	3	7	28
18	7	55	4	5	6	4	5	14	5	38	6	22	4	3	7	30
19	7	53	4	7	6	4	5	16	5	36	6	24	4	2	7	32
20	7	51	4	9	6	4	5	19	5	34	6	26	4	2	7	34
21	7	49	4	11	6	3	5	21	5	32	6	28	4	2	7	36
22	7	47	4	13	6	3	5	23	5	30	6	30	4	2	7	38
23	7	45	4	15	6	3	5	25	5	28	6	32	4	2	7	40
24	7	43	4	17	6	3	5	28	5	26	6	34	4	1	7	42
25	7	41	4	19	6	2	5	31	5	24	6	36	4	1	7	45
26	7	39	4	21	6	2	5	33	5	21	6	39	4	1	7	47
27	7	37	4	23	6	2	5	35	5	19	6	41	4	1	7	49
28	7	34	4	26	6	2	5	37	5	17	6	43	4	0	7	51
29	7	32	4	28					5	15	6	45	4	0	7	53
30	7	30	4	30					5	12	6	48	4	0	7	55
31	7	28	4	32					5	10	6	50				

The Table of the Sun's Rising and Setting at Edinburgh, Inverarra, Copenhagen and Moscow, continu'd.

Days.	May.				June.				July.				August.			
	Sun r.		Sun s.		Sun r.		Sun s.		Sun r.		Sun s.		Sun r.		Sun s.	
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.
1	4	37	57	3	21	8	39	3	32	8	28	4	25	7	35	
2	4	17	59	3	21	8	39	3	33	8	27	4	27	7	33	
3	3	59	8	1	3	20	8	40	3	34	8	26	4	29	7	31
4	3	58	8	2	3	20	8	40	3	36	8	24	4	31	7	29
5	3	56	8	4	3	20	8	40	3	37	8	23	4	34	7	26
6	3	54	8	6	3	20	8	40	3	39	8	21	4	36	7	24
7	3	53	8	7	3	19	8	41	3	40	8	20	4	38	7	22
8	3	51	8	9	3	19	8	41	3	41	8	19	4	40	7	20
9	3	49	8	11	3	19	8	41	3	43	8	17	4	43	7	17
10	3	47	8	13	3	19	8	41	3	44	8	16	4	45	7	15
11	3	45	8	15	3	19	8	41	3	45	8	15	4	47	7	13
12	3	44	8	16	3	19	8	41	3	47	8	13	4	50	7	10
13	3	42	8	18	3	19	8	41	3	49	8	11	4	52	7	8
14	3	40	8	20	3	20	8	40	3	51	8	9	4	54	7	6
15	3	39	8	21	3	20	8	40	3	52	8	7	4	56	7	4
16	3	37	8	23	3	20	8	40	3	54	8	6	4	58	7	2
17	3	36	8	24	3	20	8	40	3	56	8	4	5	0	1	0
18	3	34	8	26	3	21	8	39	3	58	8	2	5	2	6	58
19	3	33	8	27	3	21	8	39	3	59	8	1	5	5	6	55
20	3	32	8	28	3	22	8	38	4	1	7	59	5	8	6	52
21	3	31	8	29	3	22	8	38	4	3	7	57	5	11	6	49
22	3	30	8	30	3	23	8	37	4	5	7	55	5	14	6	46
23	3	29	8	31	3	24	8	36	4	7	7	53	5	16	6	44
24	3	28	8	32	3	24	8	36	4	9	7	51	5	19	6	41
25	3	27	8	33	3	25	8	35	4	11	7	49	5	21	6	39
26	3	26	8	34	3	26	8	34	4	13	7	47	5	23	6	37
27	3	25	8	35	3	27	8	33	4	15	7	45	5	25	6	35
28	3	24	8	46	3	28	8	32	4	17	7	43	5	27	6	33
29	3	23	8	37	3	29	8	31	4	19	7	41	5	29	6	31
30	3	22	8	38	3	30	8	30	4	21	7	39	5	31	6	29
31	3	22	8	38					4	23	7	37	5	33	6	27

The Table of the Sun's Rising and Setting at Edinburgh, Inverarra, Copenhagen and Moscow, continu'd.

Days.	September.				October.				November.				December.			
	Sun r.		Sun s.		Sun r.		Sun s.		Sun r.		Sun s.		Sun r.		Sun s.	
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.
1	5	35	6	25	6	44	5	16	7	54	4	6	8	38	3	22
2	5	38	6	22	6	46	5	14	7	56	4	4	8	38	3	22
3	5	41	6	20	6	48	5	12	7	58	4	2	8	39	3	21
4	5	42	6	18	6	50	5	10	8	0	4	0	8	39	3	21
5	5	44	6	16	6	52	5	8	8	2	3	58	8	39	3	21
6	5	46	6	14	6	55	5	5	8	4	3	56	8	40	3	20
7	5	48	6	12	6	57	5	3	8	6	3	54	8	40	3	20
8	5	50	6	10	6	59	5	1	8	8	3	52	8	40	3	20
9	5	53	6	7	7	2	4	58	8	10	3	50	8	41	3	19
0	5	55	6	5	7	5	4	55	8	11	6	49	8	41	2	19
1	5	57	6	3	7	7	4	53	8	13	3	47	8	41	3	19
2	6	0	6	0	7	9	4	51	8	15	3	45	8	40	3	20
3	6	2	5	58	7	12	4	48	8	16	3	44	8	40	3	20
4	6	4	5	56	7	14	4	46	8	18	3	42	8	40	3	20
5	6	7	5	53	7	16	4	44	8	19	3	41	8	39	3	21
6	6	9	5	51	7	18	4	42	8	20	3	40	8	39	3	21
7	6	11	5	49	7	20	4	40	8	21	3	39	8	38	3	22
8	6	13	5	47	7	23	4	37	8	23	3	37	8	38	3	22
9	6	15	5	45	7	25	4	35	8	25	3	35	8	37	3	23
0	6	18	5	42	7	27	4	33	8	27	3	33	8	37	3	23
1	6	20	5	40	7	30	4	30	8	28	3	32	8	36	3	24
2	6	23	5	37	7	32	4	28	8	29	3	31	8	36	3	24
3	6	25	5	35	7	34	4	26	8	30	3	30	8	35	3	25
4	6	27	5	33	7	36	4	24	8	31	3	29	8	35	3	25
5	6	30	5	30	7	39	4	21	8	32	3	28	8	34	3	26
6	6	32	5	28	7	41	4	19	8	33	3	27	8	33	3	27
7	6	34	5	26	7	43	4	17	8	34	3	26	8	32	3	28
8	6	37	5	23	7	45	4	15	8	35	3	25	8	31	3	29
9	6	39	5	21	7	47	4	13	8	36	3	24	8	30	3	30
0	6	41	5	19	7	49	4	11	8	37	3	23	8	29	3	31
1					7	51	4	9					8	28	3	32

Proceedings of the

Date	Place	Time	Subject	Remarks	Remarks	Remarks	Remarks	Remarks
1880								
1881								
1882								
1883								
1884								
1885								
1886								
1887								
1888								
1889								
1890								
1891								
1892								
1893								
1894								
1895								
1896								
1897								
1898								
1899								
1900								



A Table of the Sun's Rising and Setting at these Places hereunder nam'd.

The Month and the Day.	Archangel.				Constantinople Boston in New England.				Dublin, and York in Old England.			
	☉ ri.		☉ sets		☉ ri.		☉ sets		☉ ri.		☉ sets	
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.
Jan. 10	9	18	2	42	7	18	4	42	7	56	4	4
Febr 10	7	32	4	28	6	40	5	20	6	58	5	2
March 10	5	58	6	2	5	59	6	1	5	59	6	1
April 10	4	16	7	44	5	15	6	45	4	55	7	5
May 10	2	38	9	22	4	41	7	29	4	2	7	58
June 10	1	37	10	23	4	26	7	34	3	37	8	23
July 10	2	33	9	27	4	39	7	21	3	59	8	1
August 10	4	12	7	48	5	14	6	46	4	52	7	8
Sept. 10	5	53	6	7	5	57	6	3	5	56	6	4
Octob. 10	7	33	4	27	6	40	5	20	6	59	5	1
Nov. 10	9	14	2	46	7	18	4	42	7	57	4	3
Dec. 10	10	23	1	37	7	34	4	26	8	23	3	37

The Month and the Day.	Fort S. George and Barbadoes.				Gibraltar and Virginia.				St. Helena.			
	☉ ri.		☉ sets		☉ ri.		☉ sets		☉ ri.		☉ sets	
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.
Jan. 10	6	19	5	41	7	2	4	58	5	36	6	24
Febr. 10	6	10	5	50	7	32	4	28	5	48	6	12
Mar. 10	6	00	6	00	5	59	5	1	6	0	6	0
April 10	5	49	6	11	5	24	6	36	6	14	5	46
May 10	5	40	6	20	4	57	7	3	6	24	5	36
June 10	5	37	6	23	4	45	7	15	6	28	5	32
July 10	5	40	6	20	4	56	7	4	6	24	5	36
August 10	5	48	6	12	5	23	6	37	6	14	5	46
Sept. 10	5	59	6	1	5	58	6	2	6	1	5	59
Octob. 10	6	10	5	50	6	32	5	28	5	48	6	12
Nov. 10	6	19	5	41	7	2	4	58	5	36	6	24
Dec. 10	6	23	5	37	7	15	4	45	5	32	6	28

*A Table of the Sun's Rising and Setting at these Places  
bereunder nam'd.*

The Month and the Day.	<i>Famaiea. S. Christophers</i>				<i>Alexandria. Jerusalem. Damascus. Hoaign. China.</i>				<i>Lisbon and Port-Mahon.</i>			
	☉ ri.		☉ set.		☉ ri.		☉ set.		☉ ri.		☉ set.	
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.
Jan. 10	6	28	5	32	6	53	5	7	7	8	4	52
Febr. 10	6	14	5	46	6	27	5	33	6	34	5	26
March 10	6	00	6	00	5	59	6	1	5	59	6	1
April 10	5	44	6	16	5	29	6	31	5	21	6	39
May 10	5	32	6	28	5	6	6	54	4	51	7	9
June 10	5	27	6	33	4	56	7	4	4	38	7	22
July 10	5	31	6	29	5	5	6	55	4	50	7	10
August 10	5	35	6	25	5	28	6	32	5	20	6	40
Sept. 10	5	59	6	1	5	58	6	2	5	57	6	3
Octob. 10	6	15	5	45	6	28	5	32	6	35	5	25
Nov. 10	6	28	5	32	6	53	5	7	7	8	4	52
Dec. 10	6	33	5	27	7	4	4	56	7	22	4	38

The Month and the Day.	<i>Madrid.</i>				<i>Paris, and Vienna.</i>				<i>Petersburgh, Stockholm, and Revel.</i>			
	☉ ri.		☉ set.		☉ ri.		☉ set.		☉ ri.		☉ set.	
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.
Jan. 10	7	11	4	49	7	38	4	22	8	36	3	24
Febr. 10	6	36	5	24	6	49	5	11	7	16	4	44
March 10	5	59	6	1	5	59	6	1	5	58	6	2
April 10	5	19	6	41	5	5	6	55	4	35	7	25
May 10	4	48	7	12	4	20	7	40	3	21	8	39
June 10	4	34	7	26	4	1	7	59	2	42	9	18
July 10	4	46	7	14	4	26	7	34	3	17	8	43
August 10	5	18	6	42	5	3	6	57	4	32	7	28
Sept. 10	5	57	6	3	5	56	6	4	5	55	6	5
Octob. 10	6	37	5	23	6	50	5	10	7	16	4	44
Nov. 10	7	11	4	49	7	38	4	22	8	36	3	24
Dec. 10	7	26	4	34	7	59	4	1	9	16	2	44

A Table of the Sun's Rising and Setting at these Places hereunder nam'd.

The Month & the Day.	Cape of Good Hope.				Aberdeen,				Babylon,			
	☉ ri.		☉ sets		☉ ri.		☉ sets		☉ ri.		☉ sets	
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.
Jan. 10	5	3	0	57	8	16	3	44	6	58	5	2
Febr. 10	5	31	6	29	7	7	4	53	5	29	6	31
March 10	6	1	5	59	5	59	6	1	5	59	6	1
April 10	6	33	5	27	4	44	7	16	5	27	6	33
May 10	6	58	5	2	3	41	8	19	5	1	6	59
June 10	7	9	4	51	3	11	8	49	4	51	7	9
July 10	6	59	5	1	3	38	8	22	5	0	7	0
August 10	6	34	5	26	4	42	7	18	5	26	6	34
Sept. 10	6	2	5	58	5	55	6	5	5	58	6	2
Octob. 10	5	30	6	30	7	8	4	52	6	26	5	34
Nov. 10	5	3	6	57	8	17	3	43	6	55	5	5
Dec. 10	4	59	7	3	8	49	3	11	7	9	4	51

The Month & the Day.	Venice,				Teneriffe,				Greenland,	
	☉ ri.		☉ sets		☉ ri.		☉ sets		☉ ri.	☉ sets
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.
Jan. 10	7	27	4	33	6	44	5	16	All	Night
Febr. 10	6	44	5	16	6	23	5	37	11	23
March 10	5	59	6	1	5	59	6	1	5	55
April 10	5	11	6	49	5	35	6	25		
May 10	4	32	7	28	5	15	6	45		
June 10	4	15	7	45	5	7	6	53	All	Day.
July 10	4	30	7	30	5	14	6	46		
August 10	5	9	6	51	5	34	6	26		
Sept. 10	5	57	6	3	5	58	6	2		
Octob. 10	6	44	5	16	6	23	5	37	5	43
Nov. 10	7	27	4	33	6	44	5	16	☉ does not	
Dec. 10	7	45	4	15	6	53	5	7	rise here till	
									Feb. 10,	

*Of the Sun's Rising and Setting at Greenland.*

**B**Y the preceding Table you may see, the Sun rises to *Greenland*, the 10th of *February*, 23 min. past 11, and sets 37 min. past 12; and so continues to rise and set till *April* 7; And then he appears in their Horizon at Midnight, and goes round them (once in 24 Hours) till *August* 14, when he begins to set; from that time, he rises and sets every Day till *October* 10; then he sets for good and all; they see him no more till *Feb*, 10, following: So the Length of their longest Day is 128 of our Days; and their longest Night 122. Their shortest Day and Night are but a few Minutes.

There are two Places on the Globe (the Polar Horizons) where the Inhabitants (if there be any) have but one Day and one Night in a Year. The Sun rises to those who live directly under the North Pole the Ninth of *March*, and sets the Twelfth of *September*: To those under the South Pole, the Sun rises the 12th of *September*. and sets the 19th of *March*. The Sun's Altitude in either of these Places can never exceed 23 Degr. 30 Min. for that is the Sun's greatest Declination from the Equinoctial Line, to either of the Tropicks of *Cancer* or *Capricorn*. By which you may perceive, the Sun can have but very faint Influence upon these Mountains of Ice, and frozen Seas! there arrested by the tyrannical Winds of the Poles: Which Winds penetrate thro' the Bowels of the Hills, closing up the Pores of the Earth, forbidding her Pregnancy, congealing the liquid Element into Chrystal Rocks, and solid Plains of Glafs! Fiercely forbidding the flowing Obedience of the Ocean, to the Moon, and making the soft and nourishing Bosom of the Waters become the flinty Sepulchre of the finny Armies of the Deep.

*The Explanation of the Six following Tables.*

**I**N the Table for the Sun's Place, look for the Month at the top, and for the Day in the side; under the Month, and against the Day, you have the Degree and Minute of the Sun's Place in any of the twelve Signs. The first of *January* the Sun is in *Capricorn* 22 Degrees, 9 minutes; the first of *February*, 23 Degrees, 37 minutes in *Aquarius*; the 10th of *March*, 38 minutes in *Aries*. See the Table.

*The Names and Characters of the Twelve Signs.*

*Aries* the Ram, ♈, *Taurus* the Bull, ♉, *Gemini* the Twins, ♊, *Cancer* the Crab, ♋, *Leo* the Lion, ♌, *Virgo* the Virgin, ♍, *Libra* the Ballance, ♎, *Scorpio* the Scorpion, ♏, *Sagittarius* the Archer, ♐, *Capricornus* the He-Goat, ♑, *Aquarius* the Waterer, ♒, and *Pisces* the Fishes, ♓.

I only name the Signs here for the sake of the Learner, that he may not be at a loss to express the Sun's Place in any of these Signs or Constellations; for in the Tables they are signify'd by these Characters annex'd.

*Of Day-break, Twilight, &c.*

Look for the Month and the Day in the side, and against them to the Right, you have the Hour and Minute of Day-break, Twilight, Day's length, Night's length. *Feb. 20*, Day breaks 39 min. after 4; the end of Twilight, (that is, after Sun-set) 21 min. after 7; Day's length 10 hours, 52 min. Night's length, 13 hours, 8 minutes.

*Of the Equation of Time.*

Look for the Month at the top of the Table, for the Day in the side; in the Place of meeting you have the Difference in Minutes and Seconds, between a good Clock and a true Sun-Dial. *Fan. 26*, the Difference is 14 minutes 54 seconds. See the Table.

A Table of the Sun's Place throughout the Year.

Days.	Jan.		Febr.		March.		April.		May.		June.	
	☉ in ♋	'	☉ in ♌	'	☉ in ♍	'	☉ in ♎	'	☉ in ♏	'	☉ in ♐	'
1	22	9	23	37	21	41	22	17	21	23	21	6
2	23	10	24	37	22	41	23	15	22	21	22	3
3	24	11	25	38	23	41	24	14	23	19	23	0
4	25	12	26	38	24	40	25	13	24	16	23	57
5	26	13	27	39	25	40	26	11	25	14	24	55
6	27	14	28	36	26	39	27	10	26	12	25	52
7	28	15	29	40	27	39	28	8	27	10	26	49
8	29	17	0 ♋	40	28	39	29	7	28	7	27	46
9	0 ♌	18	1	40	29	38	0 ♎	5	29	5	28	43
10	1	19	2	41	0 ♏	38	1	3	0 ♐	2	29	41
11	2	20	3	41	1	37	2	2	1	0	0 ♑	38
12	3	21	4	41	2	36	3	0	1	58	1	35
13	4	22	5	42	3	36	3	59	2	55	2	32
14	5	23	6	42	4	35	4	57	3	53	3	29
15	6	24	7	42	5	34	5	35	4	50	4	27
16	7	24	8	42	6	44	6	53	5	48	5	24
17	8	25	9	42	7	33	7	51	6	45	6	21
18	9	26	10	42	8	32	8	50	7	43	7	18
19	10	27	11	42	9	31	9	48	8	40	8	15
20	11	28	12	43	10	30	10	46	9	37	9	12
21	12	29	13	43	11	29	11	44	10	35	10	10
22	13	30	14	42	12	28	12	42	11	32	11	7
23	14	30	15	42	13	27	13	40	12	30	12	4
24	15	31	16	42	14	26	14	38	13	27	13	1
25	16	32	17	42	15	25	15	36	14	24	13	58
26	17	33	18	42	16	24	16	34	15	21	14	56
27	18	33	19	42	17	23	17	32	16	19	15	53
28	19	34	20	42	18	22	18	30	17	16	16	50
29	20	35			19	21	19	28	18	14	17	47
30	21	35			20	19	20	25	19	11	18	44
31	22	36			21	18			20	8		

The Table of the Sun's Place, continu'd.

Days.	July.		August.		Sept.		Octob.		Nov.		Dec.	
	☉ in ♄	☉ in ♅	☉ in ♁	☉ in ♁	☉ in ♁	☉ in ♁	☉ in ♁	☉ in ♁	☉ in ♁	☉ in ♁	☉ in ♁	☉ in ♁
1	19	42	19	21	19	21	18	52	19	53	20	18
2	0	39	20	19	20	20	19	52	20	54	21	29
3	21	36	21	16	21	18	20	51	21	54	32	20
4	22	33	22	14	22	17	21	50	22	55	23	22
5	23	31	23	12	23	16	22	50	23	55	24	23
6	24	28	24	10	24	14	23	50	24	56	25	24
7	25	25	25	8	25	13	24	50	25	57	26	25
8	26	22	26	5	26	12	25	50	26	57	27	26
9	27	20	27	3	27	10	26	49	27	58	28	27
10	28	17	28	1	28	9	27	49	28	51	29	28
11	29	14	28	59	29	8	28	49	0 ♄	0	0 VS	30
12	0 ♁	11	29	57	0 ♁	7	29	49	1	0	1	31
13	1	9	0 ♁	55	1	6	0 ♁	49	2	1	2	32
14	2	6	1	53	2	5	1	49	3	2	3	33
15	3	4	2	51	3	4	2	49	4	3	4	34
16	4	1	3	49	4	3	3	49	5	4	5	35
17	4	58	4	47	5	2	4	49	6	4	6	36
18	5	55	5	45	6	1	5	49	7	5	7	38
19	6	53	6	43	7	0	6	49	8	6	8	39
20	7	51	7	41	7	50	7	49	9	7	0	40
21	8	48	8	39	8	58	8	50	10	8	10	41
22	9	45	9	38	9	58	9	50	11	9	11	43
23	10	43	10	36	10	57	10	50	12	10	12	44
24	11	40	11	34	11	56	11	50	13	11	13	45
25	12	38	12	32	12	55	12	50	14	12	14	46
26	13	35	13	31	13	55	13	51	15	13	15	47
27	14	33	14	29	14	54	14	51	16	14	16	48
28	15	31	15	27	15	54	15	51	17	15	17	50
29	16	28	16	26	16	53	16	52	18	16	18	51
30	17	26	17	24	17	52	17	52	19	17	19	52
31	18	23	18	23			18	53			20	53

A Table shewing Day-break, and the End of Twilight for the Latitude of London, and the Length of Day and Night.

Month and Day.	Day- break.		Twi- light.		Day's Length.		Night's Length.	
	h.	m.	h.	m.	h.	m.	h.	m.
January	1	5 52	6 8	8 0	16 0			
	10	5 44	6 16	8 24	15 36			
	20	5 32	6 28	8 54	15 6			
February	1	5 13	6 47	9 38	14 22			
	10	4 57	7 3	10 12	13 48			
	20	4 39	7 21	10 52	13 8			
March	1	4 19	7 41	11 26	12 34			
	10	4 0	8 0	12 4	11 56			
	20	3 35	8 25	12 42	11 18			
April	1	3 4	8 56	13 28	10 32			
	10	2 40	9 20	14 0	10 0			
	20	2 6	9 54	14 40	9 20			
May	1	1 23	10 37	15 14	8 46			
	10	14	11 36	15 42	8 18			
	20			16 4	7 56			
June	1	No Night, but		16 22	7 38			
	10	Twilight.		16 26	7 34			
	20			16 22	7 38			
July	1			16 6	7 54			
	11	0 17	11 43	15 42	8 18			
	20	1 20	10 40	15 18	8 42			
August	1	2 6	9 54	14 38	9 22			
	10	2 35	9 25	14 8	9 52			
	20	3 5	8 55	13 30	10 30			
September	1	3 35	8 25	12 44	11 16			
	10	3 56	8 4	12 8	11 52			
	20	4 18	7 42	11 28	12 32			
October	1	4 41	7 19	10 46	13 16			
	10	4 59	7 1	10 10	13 50			
	20	5 15	6 45	9 32	14 28			
November	1	5 33	6 27	8 50	15 10			
	10	5 43	6 17	8 12	15 38			
	20	5 54	6 6	7 58	16 2			
December	1	5 59	6 1	7 40	16 20			
	10	6 1	5 59	7 34	16 26			
	20	6 1	5 59	7 42	16 18			



A Table, shewing Day-break, and the End of Twilight for the Latitude of Edinburgh, and the Length of the Day and Night.

Month and Day.	Day break		Twilight		Day's Length.		Night's Length	
	h.	m.	h.	m.	h.	m.	h.	m.
January	1	5 59	6	1	7	10	16	50
	10	5 48	6	12	7	38	16	22
	20	5 33	6	27	8	10	15	42
February	1	5 11	6	49	9	10	14	50
	10	5 53	6	7	9	50	14	10
	20	4 30	7	30	10	38	13	22
March	1	4 9	7	51	11	20	12	40
	10	3 43	8	17	12	4	11	56
	20	3 12	8	48	12	52	11	8
April	1	2 31	9	29	13	44	10	16
	10	1 53	9	7	14	26	9	34
	20	0 53	11	7	15	8	8	52
May	1				15	54	8	6
	10				16	26	7	34
	20				16	56	7	4
June	1	No Night, but Twilight.			17	18	6	42
	10	from Apr. 23,			17	22	6	38
	20	to July 29.			17	16	6	44
July	1				16	56	7	4
	10				16	32	7	28
	20				15	58	8	2
August	1	0 54	11	6	15	10	8	50
	10	1 50	10	10	14	30	9	58
	20	2 33	9	27	13	44	9	16
September	1	3 14	8	46	12	50	10	10
	10	3 41	8	19	12	10	11	50
	20	4 8	7	52	11	24	12	36
October	1	4 35	7	25	10	32	13	28
	10	4 55	7	5	9	50	14	10
	20	5 15	6	45	7	6	14	54
November	1	5 36	6	24	8	12	15	48
	10	5 49	6	11	7	38	16	22
	20	6 0	6	0	7	6	16	54
December	1	6 8	5	52	6	44	17	16
	10	6 10	5	50	6	38	17	22
	20	6 8	5	52	6	46	17	16

A Table of the Equation of Time, for Regulating of Clocks and Watches, &c.

Days.	Jan.	Febr.	March.	April.	May.	June.
1	9 10	15 0	10 16	0 48	4 8	1 1
2	9 34	14 59	9 58	0 32	4 10	0 49
3	9 56	14 57	9 40	0 16	4 11	0 37
4	10 15	14 52	9 22	0 0	4 13	0 25
5	10 34	14 48	9 4	0 15	4 11	0 12
6	10 55	14 43	8 46	0 30	4 9	0 0
7	11 14	14 38	8 28	0 44	4 8	0 14
8	11 33	14 30	8 10	0 58	4 6	0 26
9	11 52	14 22	7 52	1 10	4 5	0 40
10	12 9	14 15	7 34	1 24	4 3	0 54
11	12 24	14 6	7 14	1 37	4 0	1 8
12	12 40	13 57	6 54	1 49	3 56	1 23
13	12 55	13 49	6 36	2 1	3 51	1 36
14	13 10	13 40	6 19	2 11	3 46	1 49
15	13 22	13 30	6 0	2 22	3 40	2 0
16	13 35	13 20	5 40	2 32	3 34	2 12
17	13 46	13 10	5 20	2 41	3 27	2 22
18	13 58	13 0	5 0	2 51	3 20	2 35
19	14 8	12 48	4 40	3 1	3 12	2 46
20	14 17	12 36	4 20	3 10	3 3	2 58
21	14 25	12 24	4 1	3 19	2 54	3 9
22	14 31	12 11	3 44	3 27	2 45	3 20
23	14 36	11 57	3 23	3 35	2 36	3 31
24	14 42	11 42	3 5	3 40	2 26	3 42
25	14 46	11 36	2 48	3 45	2 17	3 53
26	14 54	11 10	2 30	3 50	2 6	4 12
27	14 54	10 52	2 13	3 50	1 57	4 12
28	14 55	10 34	1 55	4 0	1 46	4 21
29	14 59		1 37	4 3	1 35	4 31
30	15 0		1 20	4 6	1 23	4 40
31	15 0		1 4		1 12	

The Table of the Equation of Time, for Regulating of Clocks and Watches, &c. continu'd.

Days.	July.		Aug.		Sept.		Octob.		Nov.		Dec.	
	'	"	'	"	'	"	'	"	'	"	'	"
1	4	48	4	27	3	51	13	33	15	25	5	38
2	4	Clocks 56	4	Clocks 16	4	Clocks 2	13	Clocks 47	15	Clocks 22	5	Clocks 11
3	5	Clocks 3	4	Clocks 5	4	Clocks 14	14	Clocks 00	15	Clocks 12	4	Clocks 44
4	5	Clocks 10	3	Clocks 54	4	Clocks 56	14	Clocks 12	15	Clocks 03	4	Clocks 07
5	5	16	3	42	5	17	14	24	14	52	3	48
6	5	21	3	30	5	38	14	35	14	40	3	20
7	5	falter 26	3	falter 18	6	flower 00	14	flower 45	14	flower 27	2	flower 50
8	5	falter 31	3	falter 3	6	flower 22	14	flower 55	14	flower 13	2	flower 19
9	5	falter 34	3	50	6	flower 42	15	04	13	58	1	48
10	5	37	2	37	7	04	15	13	13	42	1	16
11	5	40	2	28	7	24	15	22	13	25	0	44
12	5	42	2	8	7	45	15	32	13	07	0	12
13	5	than 44	2	53	8	than 04	15	than 40	12	than 48	0	21
14	5	than 45	1	38	8	than 24	15	than 47	12	than 29	0	51
15	5	46	1	24	8	44	15	52	12	10	1	21
16	5	48	1	9	9	03	15	56	11	50	1	Clocks 51
17	5	Sun 48	0	52	9	Sun 23	16	Sun 00	11	Sun 30	2	Clocks 21
18	5	Sun 48	0	38	9	Sun 43	16	Sun 04	11	Sun 10	2	51
19	5	47	0	17	10	02	16	03	10	49	3	21
20	5	45	0	= 0	10	20	16	07	10	28	3	50
21	5	Dials. 40	0	18	10	Dials. 40	16	Dials. 08	10	Dials. 04	4	falter 18
22	5	Dials. 36	0	36	10	Dials. 58	16	Dials. 09	9	Dials. 40	4	falter 47
23	5	Dials. 30	0	flower 55	11	Dials. 16	16	Dials. 09	9	Dials. 14	5	falter 13
24	5	26	1	flower 14	11	35	16	09	8	48	5	40
25	5	20	1	flower 30	11	54	16	08	8	21	6	08
26	5	15	1	47	12	12	16	06	7	53	6	35
27	5	8	2	7	12	30	16	02	7	25	7	00
28	5	0	2	27	12	47	15	57	6	58	7	29
29	4	53	2	48	13	04	15	51	6	31	7	53
30	4	46	3	8	13	20	15	45	6	04	8	17
31	4	35	3	37			15	37			8	41

*A Table of the Moon's Southing and Shining; by which may be readily found her Rising and Setting.*

**T**O find the Moon's Southing, enter the first Column with the Moon's Age; and against it in the next Column on the Right Hand, is the time of her Southing; which time is in the Afternoon, if the Moon be under 15 Days old; but if mote, the time is in the Morning.

The Moons Age.		Time of South		The Moons Age.		Time of Shin	
1	16	0	48	1	29	0	48
2	17	1	36	2	28	1	36
3	18	2	24	3	27	2	24
4	19	3	12	4	26	3	12
5	20	4	00	5	25	4	00
6	21	4	48	6	24	4	48
7	22	5	36	7	23	5	36
8	23	6	24	8	22	6	24
9	24	7	12	9	21	7	12
10	25	8	00	10	20	8	00
11	26	8	48	11	19	8	48
12	27	9	36	12	18	9	36
13	28	10	24	13	17	10	24
14	29	11	12	14	16	11	12
15	30	12	00	15	15	12	00

Example 1. *Jan. 18,* 1734, the Moon is 24 Days old, which gives the time of her Southing 7 Hours, 12 Minutes in the Morning.

Example 2. *August 29,* 1734, the Moon is 12 Days old; which I seek in the first Column, and right against it in the 2d Column is 9 Hours 36 Min. which tells me, she is South 36 Minutes past 9 at Night.

*To find the Time of the Moon's Rising.*

**Rule.** If the Moon be under 16 Days old, add the time of her shining (which you'll find against her Age in the Table) to the time of Sun-rising: But if she decrease, that is, when she is above 15 Days old, subtract the time of her shining from the time of Sun-rising, gives the time of her Rising.

*The Moon's Rising and Setting continu'd.*

*Example.* JAN 6, 1734, the Moon is 12 Days old ; which gives her time of Shining to be 9 Hours, 36 Minutes : This added to 7 Hours, 54 Minutes, the time of Sun-rising at *London*, gives 5 Hours, 30 Minutes after Noon, the time of Moon-rising.

*To find the time of Moon-setting.*

If the Moon increase in Light (as she does the first 15 Days) add the time of her Shining to that of the Sun-setting ; but if she decrease, subtract the time of her Shining (found in the foregoing Table) from the Sun-setting, the Remainder is the time of her setting.

*Example.* Jan 6, 1734, the Moon is 12 Days old, gives her Shining 9 h. 36 m. which added to the time of Sun setting at *London*, gives 13 h. 42 m. that is, 42 min. past 1 next Morning, the time of the Moon-setting.

*Note,* These Rules are not perfectly true, by reason they suppose the Moon's Orbit to be a perfect Circle, lying in the Plane of the Ecliptic, and so free from Latitude, with a Motion every Day alike : For when she has great North Latitude, and in Apogee, she will rise more than an Hour and 40 Minutes sooner than by the Rules above : And when she has great South Latitude, and in Perigee, she will rise later in the Northern Hemisphere, by more than an Hour and 40 Min. So the same will happen in the time of Setting. However, these Rules will give the Reader an Idea of the Moon's Motion.

A Table of the Moon's Place every Day at Noon for the Year 1734.

Days	January.			February.			March.			April.		
	S.	°	'	S.	°	'	S.	°	'	S.	°	'
1	0	18	42	2	11	20	2	22	10	4	14	30
2	1	2	34	2	25	34	3	06	12	4	28	00
3	1	16	40	3	09	54	3	20	14	5	11	11
4	2	1	04	3	24	16	4	04	08	5	24	12
5	2	15	43	4	08	32	4	17	58	6	07	00
6	3	00	30	4	22	40	5	01	36	6	19	32
7	3	15	16	5	06	30	5	15	00	7	01	54
8	3	29	51	5	19	56	5	28	12	7	14	06
9	4	14	22	6	03	04	6	11	04	7	26	08
10	4	28	26	6	15	44	6	23	17	8	08	04
11	5	12	06	6	28	10	7	05	20	8	19	55
12	5	25	12	7	10	16	7	18	10	9	01	46
13	6	07	51	7	22	10	8	00	04	9	13	38
14	6	20	26	8	03	56	8	11	56	9	25	40
15	7	02	22	8	15	44	8	23	44	10	07	52
16	7	14	14	8	27	32	9	05	34	10	20	24
17	7	26	03	9	09	34	9	17	32	11	03	15
18	8	07	46	9	21	50	9	29	47	11	16	33
19	8	29	35	10	04	21	10	12	20	0	00	14
20	9	01	33	10	17	15	10	25	14	0	14	22
21	9	13	45	11	00	24	11	08	34	0	28	58
22	9	26	08	11	13	54	11	22	16	1	13	47
23	10	08	50	11	27	38	0	06	20	1	28	36
24	10	21	46	0	11	36	0	20	40	2	13	44
25	11	04	54	0	25	19	1	05	10	2	28	13
26	11	18	17	1	09	50	1	19	46	3	13	12
27	0	01	47	1	24	58	2	04	16	3	27	26
28	0	15	50	2	08	04	2	18	44	4	11	10
29	0	29	16				3	02	58	4	24	52
30	1	13	10				3	17	04	5	08	08
31	1	27	12				4	00	52			

The Table of the Moon's Place every Day at Noon, for the Year 1734, continu'd.

Days.	May.			June.			July.			August.		
	S.	°	'	S.	°	'	S.	°	'	S.	°	'
1	5	21	04	7	07	40	8	10	20	9	24	36
2	6	03	46	7	19	38	8	22	12	10	06	44
3	6	16	14	8	01	30	9	04	06	10	19	16
4	6	28	30	8	13	24	9	16	05	11	01	51
5	7	10	28	8	25	14	9	28	07	11	14	38
6	7	22	31	9	07	10	10	10	21	11	27	36
7	8	04	36	9	19	08	10	22	41	0	10	44
8	8	16	30	10	01	10	11	05	10	0	24	04
9	8	28	22	10	13	18	11	17	51	1	07	32
10	9	10	16	10	25	40	0	00	42	1	21	16
11	9	22	14	11	08	10	0	13	50	2	05	12
12	10	04	18	11	20	56	0	27	11	2	19	23
13	10	16	32	0	04	00	1	10	54	3	03	50
14	10	29	01	0	17	27	1	24	58	3	18	26
15	11	11	48	1	01	18	2	09	24	4	03	08
16	11	24	58	1	15	40	2	24	10	4	17	46
17	0	08	32	2	00	24	3	09	10	5	02	18
18	0	22	38	2	15	26	3	24	16	5	16	26
19	1	07	10	3	00	44	4	09	18	6	00	14
20	1	22	06	3	15	59	4	24	03	6	13	38
21	2	07	14	4	01	04	5	08	22	6	26	32
22	2	22	30	4	15	50	5	22	14	7	09	05
23	3	07	40	5	00	06	6	05	36	7	21	20
24	3	22	36	5	13	52	6	18	30	8	03	21
25	4	07	06	5	27	10	7	00	58	8	15	15
26	4	21	10	6	09	58	7	13	10	8	27	00
27	5	04	48	6	22	26	7	28	07	9	08	51
28	5	17	58	7	04	40	8	07	00	9	20	48
29	6	00	48	7	16	40	8	18	48	10	02	58
30	6	13	20	7	28	21	9	00	46	10	15	16
31	6	25	34				9	12	31	10	27	52

The Table of the Moon's Place every Day at Noon for  
the Year 1734.

Days.	September			October.			November			December.		
	S.	°	'	S.	°	'	S.	°	'	S.	°	'
1	11	10	43	0	15	51	2	07	40	3	16	26
2	11	23	50	0	29	5	2	22	30	4	01	24
3	0	07	08	1	14	0	3	07	16	4	16	10
4	0	20	40	1	28	17	3	21	54	5	00	26
5	1	04	21	2	12	4	4	06	14	5	14	17
6	1	18	11	2	26	59	4	20	16	5	27	40
7	2	02	06	3	11	14	5	04	00	6	10	30
8	2	15	08	3	25	40	5	17	27	6	23	21
9	3	00	12	4	09	26	6	00	36	7	05	48
10	3	14	23	4	23	16	6	13	21	7	18	04
11	3	28	36	5	07	00	6	26	11	8	00	10
12	4	12	50	5	20	30	7	08	42	8	12	12
13	4	26	58	6	03	50	7	21	03	8	24	8
14	5	11	00	6	17	05	8	03	14	9	06	7
15	5	24	46	6	29	47	8	15	21	9	18	0
16	6	08	16	7	12	26	8	27	23	9	29	57
17	6	21	28	7	24	52	9	09	22	10	11	56
18	7	04	22	8	07	07	9	21	17	10	23	59
19	7	16	54	8	19	11	10	03	12	11	6	7
20	7	29	10	9	01	09	10	15	11	11	18	27
21	8	11	14	9	13	12	10	27	16	0	0	57
22	8	23	09	9	24	53	11	09	34	0	13	46
23	9	05	00	10	06	50	11	22	07	0	22	56
24	9	16	50	10	18	56	0	05	00	1	10	31
25	9	28	47	11	01	16	0	18	20	1	24	38
26	10	10	53	11	13	52	1	02	05	2	9	11
27	10	23	14	11	26	51	1	06	22	2	24	13
28	11	05	54	0	10	17	2	01	04	3	9	28
29	11	18	56	0	24	06	2	16	18	3	24	53
30	0	02	13	1	08	20	3	01	17	4	10	6
31				1	22	54				4	25	4



To find the Moon's Place any Day in any Year propos'd, past, or to come, according to her Middle Motion.

The E P A C T.

	S.	D.	M.
17	4	12	41
28	8	25	23
9	1	08	04
20	5	20	46
1	10	03	27
12	2	06	09
23	6	28	50
4	11	11	31
15	3	24	13
26	8	06	54
7	0	19	36
18	5	02	17
29	9	14	58
11	1	27	40
22	6	10	21
3	10	23	03
14	3	05	44
25	7	18	26
6	0	01	07

First, find the Epact for the Year propos'd, then add the Numbers against the Epact in this Table, to the Moon's Place in the Table beforegoing, and the Sum is the Moon's Place on the Day propos'd. For Example, What's the Moon's Place the 13th day of April 1735?

First, I look for the Epact, in the Table, Page 21; and I find it to be 17, for the Year; and the Numbers against it in this Table are 4 Signs, 12 Degrees, 41 Minutes, which being added to the Moon's Place the 13th of April the Year 1734, gives the Moon's Place requir'd.

	S.	D.	M.
Moon's Place April 13, 1734,	9	13	38
Moon's Yearly Motion,	4	12	41
	<hr/>		
Moon's Place April 13, 1735,	1	26	19
Example 2. I demand the Moon's Place September 8, 1740?			
Sept. 8, 1734, Moon at Noon	2	16	8
Epact 12, Motion to be added,	2	6	9
	<hr/>		
The Motion of a Day added,	4	22	17
it being Leap-Year,	0	13	11
	<hr/>		
Moon's Place 1740,	5	3	28
Example 3. I would know the Moon's Place August 24, 1730?			
August 24, 1734, Moon at Noon in	8	3	21
Epact 22, Yearly motion add	6	10	21
	<hr/>		
Moon's Place Aug. 24, 1730	2	13	42

In this sort of Calculation, the Signs must be thus numberd :

♈ 0, ♉ 1, ♊ 2, ♋ 3, ♌ 4, ♍ 5, ♎ 6, ♏ 7, ♐ 8, ♑ 9, ♒ 10, ♓ 11.

A Table of the Latitudes and Differences of Meridians  
of the following Places from London.

The Names of Places.

	Latitude		Differ.		
	D.	m.	h	m.	
<b>A</b> sterdam in Holland,	52	N. 29	0	21	Noon sooner than at London.
Archangel,	64	30	2	42	
Antwerp, in Flanders, — —	51	12	0	17	
Alexandria in Ægypt,	31	7	2	42	
Babylon in Turkey. Asia,	34	30	3	56	
Berlin in Germany,	52	33	0	54	
Cape of Good Hope,	34	S. 15	1	8	
Constantinople, in Europe,	43	N 00	2	7	
Copenhagen in Denmark,	55	43	0	50	
Fort St. George, in the East Indies,	13	8	5	24	
Greenland,	79	5	0	43	
Hanover in Germany,	52	35	0	40	
Hoaignam in China	33	35	7	56	
Jerusalem in Asia minor,	32	30	2	22	
Moscow in Moscovy,	55	25	2	38	
Ostend in Flanders,	51	11	0	12	
Paris in France,	48	51	0	10	
Petersburgh in the Gulf of Finland,	60	4	2	36	
Port-mahon in Minorca	39	45	0	16	
Revel in Finland,	56	13	1	36	
Rome in Italy,	41	50	0	52	
Stockholm in Sweden,	59	30	1	10	
Venice, in Italy — —	45	15	1	4	
Vienna in Germany,	45	14	1	1	
Warsaw in Poland,	52	14	1	27	
<hr/>					
LONDON, the Grand <sup>m</sup> eridian.	51	32			
<hr/>					
Aberdeen in Scotland,	57	N. 6	0	7	Noon later.
Barbadoes. — —	13	2	3	57	
Boston in New England,	42	24	4	45	
Dublin in Ireland,	53	0	0	28	
Edinburgh in Scotland,	56	20	0	12	
Gibraltar in Spain,	36	7	0	25	
Glasgow in Scotland,	45	30	0	17	
Virginia, Cape Charles — —	37	47	4	7	
Inverara, Argyle shire,	56	30	0	20	
Jamaica, — — — —	18	25	5	4	
Lisbon in Portugal,	38	42	0	37	
Madrid in Spain	40	10	0	13	
Teneriff, Canary	27	56	1	8	

The Changes and Eclipses truly calculated for 30 Years compleat, for the Meridian of London; and by help of the preceding Table, may serve for the Meridian of any of these Places therein inserted.

The Changes Explain'd.

**Y**OU have nothing to do here, but to look for the Year and the Month in the first Column on the Left hand, and in the other four Columns, to the Right, you have the Day, Hour and Minute of New Moon, first Quarter, Full Moon and last Quarter.

Example 1, for 1734. Having found the Year, I look for *January*, which I find in the first Column, and against it, in the second Column, I find it's Full Moon 25 min. past 5, the 9th Day; New Moon the 23d Day, 23 min. past 11, Night; First Quarter, the 31st Day, 21 min. past 8.

Example 2, for *December*, 1735. Having found the Year and the Month, I find against *December*, and under the Title *Last Quarter*, 25-12-21, the Day, Hour and Minute of Last Quarter: In the next Column, I find 3-7-32, the Day, Hour and Minute of New Moon. In the 4th I see 10-4-30, the Day, Hour and Minute of the First Quarter. In the 5th Column you have Full Moon 26 min. past 1, the 18th Day, Morning.

Example 3, for 1736. I demand the Day, Hour and Minute of the New Moon in *January*? Against *Jan.* in the next Column, to the Right, I find, the Moon changes 10 min. past 1, the 2d Day, Morning; the next New Moon happening in the same Month, you'll find it coupled with the First, in the same Column, *Jan.* 31-8-15.

*Note.* (*m*) signifies Morning and (*a.*) Afternoon.

*Of the several sorts of Eclipses, and their Causes.*

**T**HE Word *Eclipse*, in general, signifies a Deprivation of Light. The Eclipse of the *Sun*, (or rather of the Earth) is caused by the Interposition of the *Moon* between him and our sight, and can never happen, but at the Change, or Conjunction, when they are less than 18 Degrees distant, either before, or after the *Moon's* Nodes.

The *Moon's* Eclipse is caused by the Interposition of the Earth between the *Sun* and *Moon*; which never happens, but at the Full Moon, and when she is within twelve Degrees of either Node.

There are four sorts of Eclipses, viz. 1. Partial; 2. Central and Annular; 3. Total without Continuance; 4. Total with Continuance.

1. Partial, is when some part of the *Sun's*, or *Moon's* Body is Obscur'd, or less than twelve Digits.

2. *Annular*, is when at the Conjunction, or Interlunium, the *Moon* happens near her Apogee, or greatest distance from the Earth, and when the *Sun* is somewhere in the lower part of his Orbit, towards his Perigee, or least Distance from the Earth; at which time the *Sun's* apparent Diameter will be considerably greater than the *Moon's*; and they being apparently concentrick, there will be seen a Ring of Light round the *Moon's* Body. Such an Eclipse seldom happens.

3. *Total* without Continuance, is when the Apparent Diameters of the *Sun* and *Moon* are equal, or of the *Moon* and Shadow of the Earth.

4. *Total* with Continuance. The *Sun* may be somewhat Eclipsed above twelve Digits; but cannot continue totally dark above five Minutes. But the *Moon's* Eclipse sometimes amounts to 23 Digits; all above 12, shews her Continuance Totally dark.

There can be no less than Two, nor more than Six Eclipses of the *Sun* and *Moon* in one Year; and when Two, they are both of the *Sun*.

The Eclipses Explain'd.

As the Word *Digit*, is made use of to signify the quantity of an Eclipse, it will be proper here to acquaint the Learner, how it is to be understood.

*Digit*, properly a Finger's breadth, in Astronomy the 12<sup>th</sup> part of the Diameters of the Sun and Moon.

*Note*, the following Eclipses are Calculated to the middle of the time of Obscuration; so that an Observer may begin his Observation as follows.

	<i>h. m.</i>	<i>dig.</i>		
Begin to observe	0 50	3	1 quarter	The quantity Eclipsed.
Before the time	1 20	6	Half	
Annexed in the	1 30	9	3 quarters	
Following Tables	1 36	12	Total	<i>h. m.</i>
		23	Continue totally dark	1 36

*Example.* I wou'd observe an Eclipse of the Moon in the Year 1735 *Sept.* 21, 33 Minutes past 1 in the Morning; the Quantity being near 6 *Digits*, I begin my Observation at 12 of the Clock, that is, an hour and 20 min. before the time annexed. Now look in the Table of the Difference of Meridians, Page 54, and you'll see this Eclipse must be observed at *Constantinople* 2 hours, 7 min. sooner, its Longitude being above 30 Degrees East from *London*. And at *Inverara* in *Argyleshire*, 20 min. later, it being 5 Degrees West from *London*. For every Degree in Longitude gives 4 Minutes in Time.

There will be two Total Eclipses of the ☾ 1736; the first of them 25 min. after 11 at Night, 15<sup>th</sup> of *March*, *Digits* 22.

Here the Moon will continue Totally Dark above an hour and a quarter. There will be a great Eclipse of the Sun the 18<sup>th</sup> of *Feb.* 1737, 4 min. past 3, near 11 *Digits*. See the Table.

*Note*, That the Moon's Eclipse is Universal as to it's quantity and duration; the Sun's Eclipse is only seen from some particular places on the Earth where the Moon's shadow falls at that time.



1734	Full ☾ d h ' "	Last Qu. d h ' "	New ☽ d h ' "	First Qu. d h ' "
Jan.	09 05 25 m	16 2 20 m	23 11 22 a	31 8 21 m
Feb.	07 05 22 a	15 2 15 m	22 01 32 a	} 01 10 31 a
Mar.	09 07 30 m	16 4 25 a	24 00 51 m	
Apr.	07 06 48 a	15 3 45 m	22 10 04 m	29 7 02 a
May	07 04 00 m	14 1 00 a	21 05 38 a	29 2 36 m
June	05 11 20 m	12 8 36 a	20 00 41 m	27 9 40 m
July	04 06 38 a	12 3 40 m	19 07 58 m	26 4 55 a
Aug.	03 01 54 m	10 10 51 m	17 04 35 a	25 1 34 m
Sept.	02 10 32 m	09 6 00 m	16 03 56 m	23 0 58 a
Oct. }	01 05 00 a	09 2 01 m	15 06 21 a	23 3 21 m
	30 00 20 a			
Nov.	29 05 10 m	06 9 13 a	14 11 34 m	21 8 40 a
Dec	29 00 34 m	06 2 50 a	14 06 29 m	21 4 00 a

In 1734, Two Eclipses, both of the Sun, invisible to any part of Great Britain; the first is Apr. 22, at 10 Morning, and the other is Oct. 15, 21 min. past 6 at Night,

1735	Last Qu. d h ' "	New ☽ d h ' "	First Qu. d h ' "	Full ☽ d h ' "
Jan.	5 09 34 m	13 01 58 m	20 10 55 m	27 07 50 a
Feb.	4 04 00 m	11 07 52 a	19 4 19 m	26 01 0 a
Mar	5 10 01 a	13 11 26 m	20 8 20 a	28 05 10 m
Apr.	4 02 12 a	11 10 58 a	19 7 5 m	26 04 20 a
May	3 13 07 a	11 10 07 m	18 7 10 a	26 04 5 m
June	2 01 12 a	9 5 48 a	17 2 40 m	24 11 16 m
July }	1 08 40 a	9 0 37 m	16 9 27 m	23 06 25 a
	31 03 09 m			
Aug.	29 10 10 m	7 7 34 m	14 4 30 a	22 01 25 m
Sept.	27 07 16 a	5 4 24 a	13 1 16 m	20 10 21 m
Oct.	27 05 27 m	5 2 40 m	12 11 19 m	19 08 26 a
Nov.	25 07 12 a	3 4 14 a	11 1 15 m	18 10 1 m
Dec	25 10 21 m	3 7 32 m	10 4 30 a	18 01 26 m

In 1735, Four Eclipses: 1st, of ☽, Mar. 27. 41' past 10, M. invis. 2d, of ☉, April 11, 58 min. past 10, Night, invis. 3d, is of ☽. visible near 6 Digits on the lower side, on Sept. 2, 33' past 1, M. 4th of ☉, invisible, Oct. 5, 40' past 2, morn.

1736	New ☾ d. h. '	First Qu. d. h. '	Full ☽ d. h. '	Last Qu. d. h. '
Jan. {	2 1 10m.	9 10 8m.	16 7 6a.	24 16 0m.
	31 8 15a.			
Feb.		8 5 12m.	15 2 5a.	22 11 5a.
Mar. {	1 3 10a.	9 0 6m.	16 9 11m.	23 6 1a.
	31 7 20m.			
Apr.	29 9 47a.	7 4 18a.	13 3 15m.	22 10 3m.
May	29 8 55m.	7 6 45m.	14 3 40a.	22 0 31m.
June	27 5 5a.	5 5 50a.	13 2 50m.	20 11 10m.
July	27 4 12m.	5 2 0m.	12 11 6m.	19 8 9a.
Aug.	25 9 20m.	3 10 10m.	10 7 2a.	18 4 11m.
Sept.	23 5 40a.	1 6 28a.	9 3 26m.	16 0 20a.
Oct.	23 2 29m.	30 2 31m.	8 11 12m.	16 10 8m.
Nov.	21 2 38a.	28 11 35a.	7 1 10a.	14 10 15a.
Dec.	22 5 27m.	30 2 26m.	7 5 0m.	14 2 50a.

In 1736, Six Eclipses, 2 visible, both of the ☽, total. 1<sup>st</sup>, ☽, Mar. 1, 2h. 36' a. 2<sup>d</sup> Mar. 15, ☽, 11h. 52' dig. 22 Aft; 3<sup>d</sup> Mar. 31, 7h. 2' Mor. ☉, invis. 4<sup>th</sup> of the ☉, Aug. 25, 9h. 30' m. 5<sup>th</sup> of the ☽, Sept. 9, 2h. 24' m. Dig. 21. 6<sup>th</sup> Sept. 23, 5h. 44' a. invis. as also is the other of the ☉.

1737	Full ☽ d. h. '	Last Qu. d. h.	New ☽ d. h. '	First Qu. d. h. '
Jan.	5 7 0a.	8 4 1m.	19 8 50a.	27 5 40m.
Feb.	3 2 55a.	10 11 59a.	18 2 9a.	25 11 9a.
Mar.	5 8 7m.	12 5 20a.	20 1 6m.	27 5 6a.
Apr.	4 2 15m.	11 11 8m.	19 0 18m.	26 9 16m.
May	3 6 12a.	11 3 1m.	18 3 47a.	26 0 45m.
June	2 9 40m.	9 6 25a.	17 3 55m.	24 0 50a.
July {	1 9 48a.	9 6 12m.	16 3 3a.	24 0 0m.
	31 9 8m.			
Aug.	29 6 31a.	7 6 19a.	15 0 58m.	22 9 51m.
Sept	28 3 24m.	6 3 10m.	13 9 56m.	20 6 41a.
Oct.	27 1 25a.	5 0 7m.	12 7 10a.	20 4 30m.
Nov	25 11 14a.	3 10 11a.	11 5 8m.	18 2 12a.
Dec.	25 8 7m.	3 8 5m.	10 2 4a.	17 11 1a.

In 1737, Four Eclipses, 1. Of the ☉ vis. great, on Feb. 18, 3h. 4' A. Digits 11 on the upper side. 2<sup>d</sup>. Mar. 5. 0h. 35' ☽, invis. 3<sup>d</sup>. Aug. 15, 0h. 58' ☉, invis. 4<sup>th</sup>. Aug. 29, 3h. 44' visible ☽, mor, 5 Digits on the upper side.



1738	Last Qu. d. h. '	New ☾ d. h. '	First Qu. d. h. '	Full ☽ d. h. '
Jan. {	1 5 5 a.	9 5 31 m.	16 2 30 a.	23 11 20 a.
	31 8 20 m.			
Feb.	29 8 8 a.	7 5 57 a.	15 2 37 m.	22 11 31 m.
Mar. {	1 8 8 a.	9 9 37 m.	16 6 35 a.	24 3 21 m.
	31 0 22 a.			
Apr.	30 4 11 m.	8 1 50 m.	15 10 42 m.	22 7 35 a.
May	29 5 8 a.	7 4 38 a.	14 11 32 a.	22 8 17 a.
June	28 10 16 a.	6 7 6 m.	13 4 7 a.	21 1 13 a.
July	28 1 14 m.	5 10 47 a.	13 7 47 m.	20 4 42 a.
Aug.	27 2 19 m.	4 11 46 m.	12 8 43 m.	19 5 30 m.
Sept.	25 3 10 m.	3 0 51 m.	10 9 50 m.	17 6 26 a.
Oct.	24 2 5 a.	{ 2 11 4 m.	9 8 0 a.	17 5 5 m.
		{ 31 8 48 a.		
Nov.	23 7 7 m.	30 6 14 m.	8 5 6 m.	15 2 6 a.
Dec.	22 9 1 m.	29 5 10 a.	7 3 3 a.	15 0 8 m.

In 1738, Two Eclipses, and both of the Sun: 1st, Feb. 7, 5 h. 57' Aftern. invis. 2d, Aug. 4, 11 h. 3' Morn. visible 4 Digits on the lower side.

1739	First Qu. d. h. '	Full ☽ d. h. '	Last Qu. d. h. '	New ☾ d. h. '
Jan.	6 2 10 m.	13 10 11 m.	20 8 0 a.	28 4 4 m.
Feb.	4 1 4 a.	11 10 12 a.	19 7 5 m.	26 4 53 a.
Mar.	6 1 50 m.	13 10 23 m.	20 7 40 a.	28 4 57 m.
Apr.	4 1 57 a.	11 10 48 a.	19 7 12 m.	26 7 8 m.
May	3 4 8 a.	11 1 7 m.	19 10 0 m.	26 8 52 m.
June	2 5 52 m.	10 2 45 a.	17 11 40 a.	25 0 30 m.
July	2 9 30 m.	9 6 15 a.	17 3 21 m.	24 3 52 a.
Aug. {	1 0 51 m.	9 9 13 m.	16 6 17 a.	23 7 10 m.
	31 4 5 m.			
Sept.	29 5 10 m.	7 1 19 a.	14 10 20 a.	21 8 36 a.
Oct.	29 6 30 m.	6 2 0 a.	13 11 1 a.	21 9 32 m.
Nov.	26 6 38 a.	5 3 26 a.	13 0 24 m.	19 9 38 m.
Dec.	26 6 23 a.	4 3 17 m.	11 0 27 a.	19 9 23 m.

In 1739, Five Eclipses: 1st, Jan- 13, 10 h. 54' a. ☽, visible, 6 Digits on the upper side: 2d, Jan. 28, 4 h. 4' m. ☉, invis. 3d, July 9, 4 h. 18' aft, ☽, invis. 4th, July 24, 4 h. 23' m. ☉, visible 7 Digits on the upper side, 5th, Dec. 19, 8 h. 49' Sun, visible 2 Digits on the upper side.

1740	Full ☾ d. h. ' "	Last Qu. d. h. ' "	New ☽ d. h. ' "	First Qu. d. h. ' "
Jan.	3 3 20 m	11 0 19 m	17 8 7 a	25 5 11 a
Feb.	1 2 1 a	8 11 3 a	16 5 48 m	23 2 40 a
Mar. §	1 11 7 a	9 8 6 m	16 3 37 a	24 0 31 m
2	31 9 30 m			
Apr.	29 7 20 a	7 6 25 a	15 1 45 m	22 10 41 m
May	29 7 8 m	7 4 32 m	14 1 43 a	21 10 35 a
June	27 8 17 a	5 4 8 a	13 2 20 m	20 11 20 m
July	27 10 8 m	5 5 16 m	12 4 10 m	20 1 10 m
Aug.	26 1 45 a	2 7 7 a	11 7 52 a	18 4 51 a
Sept	24 6 8 a	2 10 35 m	10 0 10 m	17 9 10 m
Oct.	24 11 19 a	2 3 8 m	9 5 17 a	17 2 17 m
Nov.	23 1 22 m	1 8 22 m	8 7 40 m	15 4 26 a
		30 10 11 m		
Dec.	22 4 50 a	30 1 20 m	7 10 55 a	15 7 53 m

In 1740. Six Eclipses: 1<sup>st</sup>, of the ☽ Jan. 2, 10 h. 25' Afternoon, visible, great, 20 Digits: 2<sup>d</sup>, of the ☉, invisible, on Jan' 17, 8 h. 7': 3<sup>d</sup>, of the ☉, invis. June 13, 2h. 20' Morn: 4<sup>th</sup> of ☽, June 28, 9h. 23' invis. 5<sup>th</sup> of ☉, Dec. 7, 10 h. 55', invis. 6<sup>th</sup> of ☽, vis. 6 Digits on the lower side, Dec. 21, 11 h. 49'

1741	New ☽ d. h. ' "	First Qu. d. h. ' "	Full ☽ d. h. ' "	Last Qu. d. h. ' "
Jan'	6 11 25 m	13 8 20 a	21 5 15 m	28 2 12 a
Febr	4 9 54 a	13 6 46 m	20 3 32 a	28 00 24 m
Mar'	6 7 32 m	13 4 25 a	21 1 17 m	28 10 00 m
Apr'	4 4 42 a	12 1 40 m	19 10 30 m	26 7 25 a
May	4 1 24 m	11 10 21 m	18 7 16 a	26 4 12 m
June	2 10 00 m	9 7 00 a	16 3 51 m	24 1 7 a
July §	1 8 50 a	9 5 41 m	16 2 44 a	23 11 37 a
2	31 9 18 m			
Aug'	30 0 29 m	7 6 15 a	15 3 11 m	22 00 6 a
Sept'	28 6 1 a	6 9 26 m	13 6 19 a	21 3 13 m
Oct'	28 0 31 a	6 3 00 m	12 11 35 a	20 8 28 m
Nov'	27 6 0 m	4 9 30 a	12 6 25 m	19 3 20 a
Dec'	26 10 7 a	5 3 1 m	11 23 41 m	19 9 30 a

In 1641, Two Eclipses of the ☉ invisible; 1<sup>st</sup>, June 2, 9h. 49' m. 2<sup>d</sup>, is Nov. 27, 5 h, 44' M. The reason that the first of these is not seen in Great Britain, is because the ☽ has 49' 18" South Latitude, which is augmented by her Parallax.

1742	First Qu. d h ' m	Full ☾ d h ' m	Last Qu. d h ' m	New ☽ d h ' m
Jan.	3 7 7 m	10 04 2 a	18 01 0 m	25 0 21 a
Feb.	1 11 0 a	9 08 5 a	16 05 0 a	24 0 03 m
Mar.	3 8 49 m	10 05 42 m	18 02 34 m	25 8 56 m
Apr.	1 5 54 a	9 02 46 m	16 11 37 m	23 5 01 a
May	1 2 08 m	8 11 11 m	15 01 18 a	23 2 21 m
June	30 9 40 m			
	28 5 31 a	6 06 31 a	14 01 24 m	21 8 44 m
July	28 2 26 m	6 02 30 m	13 10 27 m	20 6 9 m
Aug.	26 1 28 a	4 11 24 m	11 08 20 a	19 7 52 a
Sept.	25 3 20 m	2 10 20 a	10 07 18 m	17 1 0 a
Oct.	24 8 00 a	2 0 15 a	9 09 10 a	17 11 00 m
Nov.	23 3 17 a	1 5 0 m	8 02 12	16 6 17 m
Dec.	23 10 34 m	1 0 15 m	8 09 12 m	16 1 36 m
		30 7 30 a		

In 1742, Four Eclipses, all invisible: the first May 8, 11 h. 38' Morn. of ☽: 2d, May 23, 0 h. 92' ☉ Morn, 3d, Nov. 1, 0 h. 30' Aft. 4th, Nov. 16, 6 h. 15' Morn. The ☽'s Lat. in the two first is North, in the two last, South.

1743	Full ☾ d h ' m	Last Qu. d h ' m	New ☽ d h ' m	First Qu. d h ' m
Jan.	29 1 17 a	7 04 26 a	14 07 36 m	22 04 31 m
Feb.	28 5 10 m	5 10 12 a	13 11 16 a	20 08 18 a
Mar.	29 5 32 a	7 02 15 a	15 01 18 a	22 08 39 m
Apr.	28 3 50 m	6 02 31 m	13 07 00 m	20 06 50 a
May	27 3 19 a	5 00 50 a	12 09 47 a	20 06 44 m
June	25 7 00 a	4 00 20 m	11 01 01 m	18 10 01 m
July	25 1 51 m	3 04 11 m	10 08 00 m	17 04 55 a
Aug.	23 10 00 m	1 10 45 m	8 04 06 a	16 01 06 a
Sept.		30 07 04 a		
	21 7 20 a	29 04 14 m	7 01 29 m	14 10 26 m
Oct.	21 8 08 m	28 05 02 a	6 02 19 a	13 11 14 a
Nov.	20 0 20 m	27 09 15 m	5 06 26 m	12 03 25 a
Dec.	19 6 42 a	27 03 35 m	5 01 00 m	12 09 50 m

In 1743, Six Eclipses: 1st, Apr. 13, 9 h. 47' Morn. ☉ invis. 2d, Apr. 27, 3 h. 21' Aft. ☽ invis. 3d, May 12, 5 h. 54' Aft. Sun, invis. 4th, Oct. 6, 2 m. 43' Aft. 5th, Oct. 22, 3 h. 35' m. the ☽, visible and total, Digits  $21\frac{1}{2}$  6th, Nov. 5, 6 h. 27' in the Morning, ☉, invisible.

1744	New ☾			First Qu.			Full ☽			Last Qu.		
	d	h	'	d	h	'	d	h	'	d	h	'
Jan.	3	8	23 a	11	05	20 m	18	2	20 a	25	11	14 a
Feb.	2	3	07 a	10	00	4 m	17	9	08 m	24	06	00 a
Mar.	3	7	51 m	10	04	51 a	18	1	50 m	25	10	42 m
Apr.	1	10	06 a	09	07	4 m	16	4	00 a	24	01	01 m
May	1	9	14 m	08	06	12 a	16	3	10 m	23	00	06 a
		30	5									
June	29	2	08 m	07	02	51 m	14	11	48 m	21	08	46 a
July	28	7	55 m	06	10	8 m	13	7	04 a	21	04	00 m
Aug.	26	3	24 a	04	04	50 a	12	1	40 m	19	10	31 m
Sept.	25	0	55 m	03	00	22 m	10	9	20 m	17	06	14 a
Oct.	24	0	37 a	02	09	54 m	9	6	47 a	17	03	40 m
Nov.	23	3	18 m	30	00	18 a	8	6	30 m	15	03	24 a
Dec.	22	8	16 a	30	05	10 m	7	9	16 a	13	06	07 m

In 1744, Four Eclipses: 1st, Apr. 1, 9 h. 51' ☉, A, invis. 2d, Apr. 15, 8 h. 32' A. ☽, vis, Digits 8, on the upper side: 3d, Sept. 25, 1 h. 18', M. ☉ invisible: 4th, Oct. 10, 0 h. 48', A. ☽ invisible.

1745	Full ☽			Last Qu.			New ☽			First Qu.		
	d	h	'	d	h	'	d	h	'	d	h	'
Jan.	6	02	10 a	13	11	04 a	21	2	35 a	28	11	31 a
Feb.	5	08	27 m	12	5	24 a	20	9	32 m	27	06	27 a
Mar.	7	03	21 m	14	0	15 a	22	2	52 m	29	11	45 m
Apr.	5	08	33 a	13	5	21 m	20	6	10 a	28	03	08 m
May	5	00	04 a	12	9	00 a	20	6	40 m	27	03	36 a
June	4	00	30 m	11	9	27 m	18	4	21 a	26	01	20 m
July	3	10	19 m	10	7	15 a	18	0	33 m	25	09	22 m
Aug.	1	06	20 a	09	3	07 m	16	8	23 m	13	05	11 a
		31	02									
Sept.	29	10	30 m	07	11	04 m	14	4	31 a	22	01	30 m
Oct.	28	07	41 a	06	7	28 a	14	1	52 m	21	10	49 m
Nov.	27	06	85 m	05	4	30 m	12	0	45 a	19	09	40 a
Dec.	26	07	22 a	04	3	10 a	12	1	37 m	19	10	31 m

In 1745, Two Eclipses, both of ☉, invisible; 1st, March 22, 2 h. 52', morn. 2d, Sept. 14, 5 h. 2' aft. The ☽'s Latitude is North in both, viz. in the first, 2' 10"; in the other 30".

1746	Last Quar. d h ' "	New ☾ d h ' "	First Quar. d. h. ' "	Full ☽ d h ' "
Jan.	3 04 22 m	10 04 51 e	18 01 50 m	25 10 46 m
Feb.	1 07 40 a	9 09 40 m	16 06 36 a	24 03 30 m
Mar.	3 00 21 a	11 03 24 m	18 00 20 a	25 09 14 a
Apr.	2 06 10 m	9 10 35 a	27 05 32 m	24 02 27 a
May	1 11 22 a	9 00 07 a	16 09 07 a	24 06 02 m
	31 03 00 a			
June	30 04 21 m	8 01 33 m	15 10 30 m	22 07 25 a
July	29 04 07 a	7 01 18 a	14 10 17 a	22 07 14 m
Aug.	28 02 26 m	5 11 29 a	13 08 28 m	20 05 28 a
Sept	26 11 20 m	4 08 40 m	11 05 39 a	19 02 31 m
Oct.	25 09 0 a	3 04 14 a	11 03 12 m	18 00 00 a
Nov.	24 06 5 m	2 03 45 m	9 00 40 a	16 09 28 a
Dec.	23 05 0 a	1 02 04 a	8 11 01 a	16 08 01 m
		31 01 45 m		

In 1746, Four Eclipses: 1st, Feb. 24, 3 h 04' aft. ☽ visible 9 Digits on the lower side: 2d, March 11, 2 h. 54', ☉, morn, invisible: 3d, August 20, 6 h. 5' morn, ☽ visible, 6 Digits on the upper side: 4th, Sept. 4 9 h. 22' ☉, invisible.

1747	First Quar. d h ' "	Full Moon. d h ' "	Last Quar. d. h. ' "	New Moon. d h ' "
Jan.	7 10 42 m	14 07 38 a	22 04 33 m	29 3 03 a
Feb.	6 0 31 m	13 09 0 m	20 06 00 a	28 5 53 m
Mar	7 2 50 a	14 11 41 a	22 08 36 m	29 9 24 a
Apr.	6 4 23 m	13 01 22 a	20 10 17 a	28 0 58 a
May	5 2 16 a	13 06 52 m	20 03 48 a	28 4 16 m
June	4 1 14 a	11 10 10 a	19 07 05 m	26 6 47 a
July	4 3 43 m	11 00 37 a	18 09 25 a	26 8 34 m
Aug.	2 5 31 a	10 02 26 m	17 11 21 m	24 9 21 a
Sept.	3 6 20 m	10 03 15 a	18 00 00 m	23 8 51 m
Oct.	1 5 46 a	08 02 43 m	15 11 40 m	22 7 31 a
	30 4 25 m			
Nov.	28 2 50 a	06 01 20 a	13 10 14 a	21 5 53 m
Dec.	28 1 21 m	05 11 44 a	13 08 36 m	20 4 21 a

In 1747, Six Eclipses: First, Jan. 29, 2 h. 52' aft. ☉, invis. 2d, Feb. 14, 5 h. 2' morn, ☽, visible and total, 20 Digits. 3d, Feb. 28, 5 h. 18' morn, ☉, invis. 4th, July 26, 8 h. 50' morn, Sun, invis. 4th, Aug. 9, 8 h. 52' morn, ☽ invis. 6th, Aug. 24, 9 h. 28' aft. ☉, invisible, by reason of the Moon's great South Latitude 1° 25' 52".

1748	Full ☽			Last Quar.			New ☾			First Quar.			
	d	h	'	d	h	'	d	h	'	d	h	'	
Jan.	4	10	22 m	11	7	13 a	19	03	22 m	26	00	20 a	
Feb.	2	9	13 a	10	6	16 m	17	02	55 a	24	11	51 a	
Mar.	3	8	45 m	10	5	35 a	18	02	59 m	25	11	57 m	
Apr.	1	8	51 a	9	5	41 m	16	03	56 a	24	10	53 m	
May	}	1	9	46 m	8	6	32 a	16	05	29 m	23	02	25 a
		30	11	20 a									
June		30	1	29 a	7	8	14 m	14	07	54 a	23	04	29 m
July		29	4	52 m	7	10	28 a	14	10	19 m	21	07	54 a
Aug.		27	8	34 a	5	1	51 a	13	02	44 m	20	11	40 m
Sept.		26	11	22 m	4	5	44 m	11	05	27 a	19	02	25 m
Oct.		26	1	17 m	3	8	18 a	11	07	22 m	18	04	17 a
Nov.		24	2	2 a	2	10	6 m	09	08	03 a	17	05	00 m
Dec.	}	24	2	11 m	1	11	3 a	09	08	09 m	16	05	03 a
					31	11	0 m						

In 1748, Four Eclipses: 1st, Jan. 19, 3 h. 25' m. ☉, invis. 2d, Feb 3, 11 h. 49' m. ☾, invis. 3d, July 14, 10 h. 30' m. ☉, visible 10 Digits: 4th, July 28, 11 h. 33', a ☾, visible 5 Digits on the lower side; the ☉'s Obscurity is on the upper side.

1749	New Moon			First Quar.			Full Moon			Last Quar.			
	d	h	'	d	h	'	d	h	'	d	h	'	
Jan.	7	07	13 a	15	4	13 m	22	01	08 a	29	10	05 a	
Febr.	6	05	37 m	13	2	35 a	20	11	30 a	28	8	28 m	
Mar.	7	03	32 a	15	0	27 m	22	09	22 m	29	6	15 a	
Apr.	6	01	14 m	13	10	12 m	20	07	05 a	28	4	04 m	
May	5	11	29 m	12	8	28 a	20	05	25 m	27	2	16 a	
June	3	11	25 a	11	8	23 m	11	05	20 a	26	2	18 m	
July	}	3	00	42 a	10	9	40 a	18	06	32 m	25	3	29 a
		31	07	41 a									
Aug.		2	03	38 m	9	0	35 a	16	09	30 a	24	6	22 m
Sept.		30	0a	04 a	8	4	31 m	15	01	20 a	22	10	18 a
Oct.		30	04	17 m	7	9	5 a	15	06	02 m	22	3	00 m
Nov.		28	07	56 a	6	1	14 a	13	10	10 a	21	7	04 m
Dec.		28	09	41 m	6	4	54 m	13	01	50 a	20	10	45 a

In 1749, Five Eclipses: 1st, Jan. 7, 7 h. 17' a. ☉, invisible; 2d, June 29, 9 h. 34' m. ☾, invisible; 3d, July 3, 0 h. 3' a. ☉, invis. 4th, Dec. 12, 8 h. 8' a. ☾ visible 5 Digits on the lower side; 5th, Dec. 28, 9 h. 12' m. ☉, visible, 7 Digits on the lower side.

1750	First Qu. d. h. '	Full ☾ d. h. '	Last Qu. d. h. '	New ☽ d. h. '
Jan.	4 6 40 a.	12 3 38 m	19 0 30 a	26 9 38 a
Feb.	3 6 36 m.	10 3 27 a	18 0 20 m	25 7 43 m
Mar.	4 4 39 a.	12 1 37 m	20 10 32 m	26 4 20 a
Apr.	3 1 20 m.	10 10 15 m	17 7 15 a	25 0 37 m
May } 31	2 9 35 m. 6 10 a.	9 6 30 a	17 3 26 m	24 9 13 m
June	30 4 1 m.	8 3 12 m	15 0 10 a	22 7 1 a
July	30 3 45 a.	7 1 0 a	14 10 4 a	22 6 48 m
Aug.	28 5 34 m.	7 0 41 m	14 9 36 m	20 8 36 a
Sept	26 9 18 a.	4 2 33 a	11 11 30 a	19 0 20 a
Oct.	26 3 5 a	4 6 15 m	11 3 11 a	19 6 5 m
Nov	25 7 30 a.	3 0 6 a	10 9 9 m	18 2 33 m
Dec.	25 3 13 m.	3 4 30 m	10 1 27 a	17 6 14 a

In 1750, Five Eclipses, 1st, Of the ☽ vis. June 8, 9 h. 9' a. 6 Digits, Total: 2d, of the ☉, June 22, 6 h. 51' a. invis. 3d, of the ☉, Nov. 18, 1 h. 19' invis. 4th, of the ☽, Dec. 2, 6 h. 32' m. Total and Visible: 5th, of the ☉, Dec. 17, 6 h. 4', a invisible.

1751	Full ☽ d. h. '	Last Qu. d. h. '	New ☽ d. h. '	First Qu. d. h. '
Jan. } 31	2 0 13 a 4 00 m	8 9 10 a	16 10 00 m	23 7 0 a
Feb.		7 1 05 a	14 10 35 a	22 7 32 m
Mar } 31	1 4 29 a 2 42 m	8 1 24 m	16 8 49 m	23 5 46 a
Apr.	29 11 30 m	7 11 39 m	14 5 33 a	22 2 31 m
May	28 6 44 a	6 8 28 a	14 0 49 m	21 9 47 m
June	27 2 47 m	5 3 40 m	12 8 50 m	19 5 50 a
July	26 10 30 m	4 11 42 m	11 4 32 a	19 1 31 m
Aug.	24 8 20 a	2 7 26 a	10 2 26 m	17 11 22 m
Sept. } 30	23 8 37 m 5 28 a	1 5 15 m	8 2 42 a	15 11 40 a
Oct.	23 0 14 m	30 9 09 m	8 6 11 m	15 3 10 a
Nov.	21 6 08 a	29 3 07 m	7 0 17 m	14 9 16 m
Dec.	21 1 48 a	28 10 47 a	6 7 52 a	14 11 50 m

In 1751, Four Eclipses: 1st, ☉, May 14, 0 h. 51', m. invis. 2d, ☽, May 29, 1 h. 57', m. visible, 10 dig. on the lower side; 3d, ☉, Nov. 7, 0 h. 43' m. invis. 4th, of the ☽, Nov. 21, 9 h. 4', a. visible, 8 digits on the upper side.

1752	New ☾			First Qu.			Full ☽			Last Qu.		
	d	h	'	d	h	'	d	h	'	d	h	'
Jan.	5	2	26 a	12	11	26 a	20	8	24 m	27	05	20 a
Feb.	4	7	49 m	11	04	49 a	19	1	45 m	27	10	40 m
Mar.	4	10	13 a	12	07	13 m	19	4	12 a	27	01	10 m
Apr.	3	8	54 m	10	05	53 a	18	2	50 m	25	11	48 m
May	2	5	43 a	10	02	41 m	17	11	40 m	24	08	37 a
June	1	1	24 m	08	10	20 m	15	7	12 a	23	04	15 m
	30	8	09 m									
July	29	3	21 a	07	05	09 a	12	2	06 m	21	11	10 m
Aug.	28	0	04 m	06	00	20 m	13	9	19 m	20	06	15 m
Sept.	26	11	19 m	04	09	14 m	11	6	12 a	19	03	10 a
Oct.	26	2	01 m	03	08	19 a	11	5	05 m	18	01	02 m
Nov.	24	7	33 a	02	11	01 m	9	8	07 a	17	05	04 m
Dec.	24	2	33 a	02	04	30 m	9	1	25 a	16	10	22 a
				31	11	32 a						

In 1752, Two Eclipses, both of the Sun, and invisible: The 1<sup>st</sup>, May 2, 5 h. 45' a. 2<sup>d</sup>, Oct. 26, 1 h. 54' m.

1743	Full ☽			Last Quar.			New ☾			First Qu.		
	d	h	'	d	h	'	d	h	'	d	h	'
Jan.	8	08	31 m	15	05	40 a	23	9	56 m	30	06	50 a
Feb.	7	03	48 m	14	00	45 a	22	3	53 m	29	00	31 a
Mar.	8	09	53 a	16	66	40 m	23	7	06 a	1	00	53 a
										31	04	06 m
Apr.	7	01	04 a	14	10	06 a	22	7	48 m	29	04	45 a
May	7	01	43 m	14	10	35 m	21	5	26 a	29	02	25 m
June	5	11	24 m	12	08	20 a	20	1	27 m	27	10	21 m
July	4	07	17 a	12	04	15 m	19	8	17 m	26	05	13 a
Aug.	3	02	10 m	10	11	00 m	17	3	20 a	25	00	20 m
Sept.	2	09	13 m	09	06	06 a	15	10	54 a	23	07	18 m
		30	04	12 a								
Oct.	30	04	29 m	08	01	01 m	15	10	30 m	22	07	30 a
Nov.	29	03	42 m	06	01	22 a	14	9	45 m	21	06	44 a
Dec.	28	09	37 m	06	00	40 a	13	3	41 a	21	00	41 m

In 1753. Four Eclipses 1<sup>st</sup>, Apr. 6, 8 h. 20' a, ☾, part visible, 5 Digits; 2<sup>d</sup>, Apr. 21, 7 h. 37' m. ☉, invis. 3<sup>d</sup>, Oct. 1. 9 h. 36' m. ☾, invis. 4<sup>th</sup>, Oct. 15, 9 h. 59' m. ☉, visible, 8 Digits on the lower side.



1754	Last Qu. d. h. ' "	New ☽ d. h. ' "	First Qu. d. h. ' "	Full ☽ d. h. ' "
Jan.	4 6 30 a	12 9 22 m	19 6 22 a	27 03 22 m
Feb.	3 0 21 a	10 11 58 a	18 8 56 m	25 05 50 a
Mar.	5 2 45 m	12 10 06 a	20 7 06 m	27 04 04 a
Apr.	4 1 00 m	11 2 30 a	18 11 30 a	26 08 26 m
May	3 5 22 a	11 4 15 m	18 1 13 a	25 10 10 a
June	2 7 07 m	9 3 24 a	17 0 24 m	24 09 20 m
July	1 6 15 a	9 0 09 m	16 9 01 m	23 06 05 a
	31 3 04 m			
Aug.	29 11 13 m	7 8 20 m	14 5 19 a	22 01 15 m
Sept.	27 7 10 a	5 4 16 a	13 1 14 m	20 10 11 m
Oct.	27 4 03 m	5 1 11 m	12 10 10 m	19 07 07 a
Nov.	25 2 10 a	3 11 20 m	10 8 19 a	18 05 16 m
Dec.	25 2 02 m	2 11 15 a	10 8 13 m	17 05 07 a

In 1754, Six Eclipses: 1<sup>st</sup>, Mar. 12, 5 h. 52' a. ☉, invis. 2<sup>d</sup>, Mar. 27, 4 h. 10' m. ☽, invis. 3<sup>d</sup>, Mar. 11, 10 h. 17' m. Sun, invis. 4<sup>th</sup>, Sept. 5, 1 h. 13' a. ☉, invis. 5<sup>th</sup>, Sept. 20, 5 h. 6' m. ☽, invis. 6<sup>th</sup>, Oct. 3, 1 h. 31' a. ☉, invis.

1755	New ☽ d. h. ' "	First Qu. d. h. ' "	Full ☽ d. h. ' "	Last Qu. d. h. ' "
Jan.	1 0 43 a.	8 9 42 a.	16 6 37 m.	23 3 30 a.
	31 5 06 m.			
Feb.		7 2 5 a.	14 11 00 a.	22 8 01 m.
Mar.	1 10 20 a.	9 7 19 m.	16 4 15 m.	24 1 10 m.
	31 3 44 a.			
Apr.	30 8 03 m.	8 0 40 m.	15 9 36 m.	22 6 21 a.
May	29 10 22 a.	7 5 3 a.	15 2 00 a.	22 11 01 m.
June	28 10 58 m.	6 5 21 m.	13 2 17 m.	20 11 10 a.
July	27 10 10 a.	5 7 58 a.	13 4 50 a.	20 1 44 a.
Aug.	26 8 04 m.	4 7 10 m.	11 4 05 m.	19 1 02 m.
Sept.	24 5 40 a.	2 5 4 a.	10 2 01 a.	17 11 00 m.
Oct.	24 3 13 m.	2 2 40 m.	9 11 35 m.	16 8 31 a.
Nov.	22 1 03 a.		8 9 09 a.	16 6 05 m.
		29 10 3 a.		
Dec.	22 0 04 m.	29 9 4 m.	7 7 05 m.	14 6 05 a.

In 1755, Four Eclipses: 1<sup>st</sup>, Mar. 1, 9 h. 45' a. ☉, invis. 2<sup>d</sup>, Mar. 17, 0 h. 12' m. ☽, visible; 7 Digits: 3<sup>d</sup>, Aug. 26, 3 h. 30' ☉, invis. 4<sup>th</sup>, Sept. 9, 10 h. 40' ☽, invisible.

1756	Full ☽ d h. ' "	Last Qu. d. h. ' "	New ☽ d. h. ' "	First Qu. d. h. ' "
Jan.	5 6 02 a	13 3 04 m	20 0 24 a	27 9 24 a
Feb.	4 6 20 m	11 3 15 a	19 2 22 m	26 11 22 m
Mar.	4 8 22 a	12 5 19 m	19 5 17 a	27 2 13 m
Apr.	3 11 10 m	10 8 05 a	18 8 41 m	25 5 37 m
May	3 2 32 m	10 11 32 m	17 11 54 a	23 8 51 m
June	1 5 47 a	9 2 41 m	16 2 37 a	23 11 31 a
July	1 8 30 m	8 5 20 a	16 5 03 m	23 2 3 a
	30 11 02 a			
Aug.	29 0 15 a	7 8 00 m	14 6 36 a	22 3 25 m
Sept	28 1 07 m	5 9 12 a	13 7 9 m	20 4 9 a
Oct.	27 0 13 a	5 10 06 m	12 7 19 a	20 3 18 m
Nov.	25 11 04 a	3 9 01 a	11 5 06 m	18 2 5 a
Dec.	25 9 27 m	3 8 05 m	10 3 32 a	18 0 30 m

In 1756. Two Eclipses of the Sun, and both invisible: 1<sup>st</sup>, Feb. 19, 1 h. 48' m. 2<sup>d</sup>, Aug. 14, 7 h. 12' a.

1757	Last Qu. d. h. ' "	New ☽ d h ' "	First Qu. d h ' "	Full ☽ d h ' "
Jan' } 2	1 6 27 a	9 0 0 m	16 9 00 a	24 6 02 m
	31 3 3 a			
Febr		7 1 3 a	14 10 03 a	22 7 07 m
Mar' } 2	1 4 2 a	9 0 34 m	16 9 14 m	23 6 13 a
	31 3 10 m			
Apr'	29 3 5 a	7 0 28 a	14 9 26 a	22 6 24 m
May	29 4 30 m	7 1 42 m	14 10 40 m	21 7 36 a
June	28 0 0 m	5 4 04 a	13 6 02 m	20 3 01 a
July	27 9 32 m	5 6 40 m	12 3 38 a	20 0 35 m
Aug'	26 1 27 m	3 10 25 a	11 7 42 m	18 4 32 a
Sept'	24 4 33 a	2 1 47 a	09 10 45 a	17 7 37 m
Oct'	24 7 41 m } 2	2 4 48 m	09 1 47 a	16 10 46 a
		31 6 00 a		
Nov'	22 9 1 a	30 8 04 m	08 7 01 m	15 0 02 a
Dec'	22 10 0 m	29 6 11 a	07 5 04 a	15 2 02 m

In 1757, Five Eclipses: 1<sup>st</sup>, Jan. 24, 7 h. 6' m, ☽ part vis. 7 Digits on the upper side: 2<sup>d</sup>, Feb. 7, 1 h. 2' a. ☉, invis. 3<sup>d</sup>, July 19, 11 h. 53' a. ☽, vis. 11 ½ Digits: 4<sup>th</sup>, Aug. 3, 10 h. 45' a. ☉, invis. 5<sup>th</sup>, Dec. 29, 6 h. 11' a. ☉, invisible.

1758	First Qu. d h ' "	Full ☾ d h ' "	Last Qu. d h ' "	New ☽ d h ' "
Jan.	6 3 11 m	13 0 10 a	20 9 04 a	28 4 36 m
Feb.	4 1 35 a	11 10 30 a	19 7 25 m	26 0 30 a
Mar.	5 9 21 a	13 6 17 m	20 3 12 a	27 11 00 a
Apr.	4 8 00 m	11 5 05 a	19 2 04 m	26 11 40 m
May	3 8 40 a	11 5 33 m	18 2 27 a	25 11 02 a
June	2 8 02 m	09 5 01 a	17 2 00 m	24 8 55 m
July	1 5 54 a	09 2 50 a	16 11 46 m	23 11 03 a
	31 8 03 m			
Aug.	29 9 46 a	07 5 02 a	15 2 01 m	22 4 49 a
Sept.	28 5 06 m	06 6 42 m	13 3 38 a	21 8 06 m
Oct.	28 10 20 m	05 2 05 m	13 11 04 m	21 1 20 m
Nov.	27 1 50 m	04 7 19 a	12 4 14 m	19 4 30 a
Dec.	26 4 29 a	04 11 47 m	11 7 41 a	19 7 29 m

In 1758, Five Eclipses : 1st, Jan. 13, 6 h. 13' m. ☽, part visible and total, Digits 21 : 2d, Jan. 28, 4 h. 36' m. ☉, invis. 3d, June 24, 8 h 55' ☉, invis. 4th, July 9, 4 h. 44' a. ☽, inv. 5th, Dec. 19, 7 h, 29' m. ☉, invisible.

1759	Full ☽ d h ' "	Last Qu. d h ' "	New ☽ d h ' "	First Qu. d h ' "
Jan.	03 01 28 m	10 10 20 m	17 7 58 a	25 4 56 m
Feb.	01 01 51 a	08 10 47 a	16 5 05 m	23 2 05 a
Mar.	02 11 04 a	10 08 03 m	17 6 44 a	25 3 40 m
Apr.	01 00 40 a	08 09 37 a	15 10 03 a	23 7 32 m
	30 04 31 a			
May	30 02 24 m	08 01 26 m	15 8 38 m	22 5 36 a
June	28 11 25 m	06 11 21 m	13 5 28 a	21 2 28 m
July	27 08 48 a	05 08 20 a	13 2 54 m	20 11 51 m
Aug.	26 10 36 m	04 05 46 m	11 4 40 a	19 1 39 m
Sept.	25 00 50 m	02 07 33 a	10 6 56 m	17 3 33 a
Oct.	24 04 41 a	02 09 45 m	09 10 52 a	17 7 50 m
Nov.	23 11 32 m	01 01 34 m	08 5 50 a	16 2 41 m
		30 08 27 a		
Dec.	23 08 10 m	30 05 08 a	08 2 12 a	15 11 12 a

In 1759, Three Eclipses : 1st, Jan. 2, 7 h. 46' m. ☽, Part visible 7 Digits on the lower side : 2d, June 13, 5 h. 23' a. Sun invis. by reason of the ☽'s South Latitude 39' : 3d, Dec. 8, 2 h. 14' Sun, invisible.

1760	New ☾ d h ' "	First Qu. d h ' "	Full ☽ d h ' "	Last Qu. d h ' "
Jan'	07 6 24 m	14 3 24 a	22 00 20 m	29 9 15 m
Feb'	05 8 36 a	13 5 32 m	20 02 27 a	27 11 18 a
Mar'	06 7 38 m	13 4 35 a	21 01 30 m	28 10 28 m
Apr'	04 5 34 a	12 2 33 m	19 11 26 m	26 8 22 a
May	04 0 53 m	11 9 51 m	18 06 47 a	26 3 41 m
June	02 7 19 m	9 4 19 a	17 01 14 m	24 10 10 m
July	01 4 00 a	9 1 00 m	16 10 00 m	23 7 00 a
	31 1 14 m			
Aug'	29 0 12 a	7 10 11 m	14 07 10 a	22 4 09 m
Sept'	28 2 52 m	5 9 12 a	13 06 04 m	20 3 04 a
Oct'	27 7 02 a	4 11 50 a	12 08 46 m	19 5 40 a
Nov'	26 2 02 a	4 4 02 m	11 01 00 a	18 10 01 a
Dec'	26 7 36 m	3 11 00 a	11 08 01 m	18 5 00 a

In 1760, Four Eclipses : 1st, May 18, 9h, 35'a. ☽, visible 1 Digit : 2d, June 2, 7h. 22' m. ☉, visible 5 Digits on the lower side : 3d, Nov. 11, 9h. 11'a. ☽, visible 6½ Digits on the upper side : 4th, Nov. 26, 2h. 2'a. ☉, invisible.

1761	First Qu. d h ' "	Full ☽ d h ' "	Last Qu. d h ' "	New ☽ d h ' "
Jan.	02 4 36 a	10 1 25 m	17 10 21 m	25 03 52 m
Feb.	01 0 51 a	08 9 43 a	16 06 38 m	23 07 08 a
Mar.	03 4 08 m	10 1 07 a	17 10 04 a	25 08 12 m
Apr.	01 5 12 a	09 2 10 m	16 11 08 m	23 05 40 a
May	01 2 36 m	08 11 31 m	15 08 27 a	23 01 24 m
	30 10 22 m			
June	28 5 33 a	06 7 21 a	14 04 18 m	21 08 37 m
July	28 0 46 m	06 2 31 m	13 11 29 m	20 03 46 a
Aug.	26 7 50 m	04 9 44 m	11 06 41 a	18 10 50 a
Sept.	24 6 32 a	02 4 40 a	09 11 34 a	17 09 40 m
Oct.	24 7 28 m	02 3 30 m	09 00 27 a	16 10 29 a
		31 4 26 a		
Nov.	22 11 15 a	30 8 10 m	08 01 24 m	15 02 15 a
Dec.	23 6 02 m	30 3 00 a	07 05 05 a	15 09 02 m

In 1761, Six Eclipses : 1st, Apr. 23, 5h. 40' m. ☉, invis. 2d, May 7, 10h. 2'a. ☽, visible, total : 3d, May 23, 1h. 24' m. ☉, invis. 4th, Oct. 16, 10h. 39'a. ☉, invis. 5th, Nov. 1, 11h. 43' m. ☽, invis. 6th, Nov. 15, 2h. 15'a. ☉, invis.  
Moon's Lat. 1° 16' S.

1762	Last Qu. d h ' m	New ☾ d h ' m	First Qu. d h ' m	Full ☽ d h ' m
Jan.	7 00 90 m	14 4 54 m	21 1 53 a	28 10 49 a
Feb.	5 07 40 m	12 10 00 a	20 7 38 m	27 4 00 a
Mar.	7 01 02 m	14 3 20 a	22 0 19 m	29 9 15 m
Apr.	5 06 12 a	13 5 28 m	20 2 27 a	27 11 24 a
May	5 08 20 m	12 4 23 a	21 1 21 m	28 10 19 m
June	4 07 14 a	11 0 19 m	18 9 17 m	25 6 14 a
July	3 03 12 m	10 8 26 m	17 5 20 a	25 2 18 m
Aug. } 30 07 01 a	1 11 10 m	08 4 0 a	16 1 00 m	23 10 00 m
Sept.	29 00 27 a	07 9 34 m	14 6 32 a	22 3 30 m
Oct.	28 00 13 a	06 9 25 m	13 6 24 a	21 3 19 m
Nov.	26 11 05 a	04 8 6 a	13 5 05 m	19 2 04 a
Dec.	26 02 20 a	04 11 30 m	11 8 30 a	19 5 26 m

In 1758, Four Eclipses: 1st. Apr. 13, 5 h. 28' m. ☉, invis. 2d, Apr. 27, 3 h. 36' m. ☾, visible 10 Digits on the upper side: 3d, Oct. 6, 8 h. 12' m. ☉, visible 6 Digits on the upper side: 4th, Oct. 21, 9 h. 11' a. ☽, visible 7 Digits on the lower side.

1763	New ☾ d h ' m	First Qu. d h ' m	Full ☽ d h ' m	Last Qu. d h ' m
Jan.	03 04 40 m	10 01 40 a	17 10 34 a	25 7 30 m
Feb.	01 09 38 a	09 06 32 m	16 3 27 a	24 0 25 m
Mar	03 04 36 a	11 01 31 m	18 10 21 m	25 7 10 a
Apr	02 10 16 m	09 07 15 a	17 4 12 m	24 1 11 a
May } 31 01 30 a	02 00 10 m	09 09 09 m	16 6 07 a	24 3 03 m
June	29 11 36 a	07 10 27 a	15 7 24 m	22 4 20 a
July	29 08 14 m	07 08 35 m	14 5 32 a	22 3 31 m
Aug.	27 04 24 a	05 05 13 a	13 2 10 m	20 11 08 m
Sept.	26 01 15 m	04 01 24 m	11 10 23 m	18 7 19 a
Oct.	25 10 10 m	03 10 21 m	10 7 18 a	18 4 14 m
Nov.	23 09 16 a	01 07 09 a	09 4 07 m	16 1 06 a
Dec. } 30 07 07 a	23 10 10 m	01 06 15 m	08 7 12 a	16 0 10 m

In 1763, Two Eclipses, both of the Sun, invisible: 1st, Apr. 2, 10 h. 5' m. the other is Sept. 26, 1 h. 5' m. Moon's Lat. is South in the first, North in the second.



*The Invisible Eclipses made Visible ; Or the Places Where, and the Time When, Calculated ; in which all these Eclipses may be seen that are Invisible to any part of Great Britain.*

THE Learner must observe, when he finds the Longitude of any of the following Places to be East from *London*, the Time of the Eclipse happens so much sooner there than it does at *London* : If West, so much later.

1734. *April 22*, 4' past 10 in the Forenoon, the Sun will be Totally Eclipsed ; in *Taurus* 12 deg. seen by all *Africa*, in *Brazil* in *South America* : It will be then Vertical to the *Ethiopian Ocean*, Latitude 15 degrees North, Longitude 30 degrees East from *London* ; which gives 2 hours in time. This Eclipse will not be conspicuous to any part of *Great Britain* or *Ireland*, by reason of the Moon's small North Latitude 2' 45" : It is also Central.

*October 15*, at 20' past 6 at Night the Sun will be Totally Eclipsed in *Scorpio* 3 deg. it will then be Visible and Vertical to *Mardelzur*, or the great Southern Ocean, West of *South America* ; Latitude 13 deg. South, Longitude West from *London*, 90 degrees, 6 Hours in Time ; therefore I conclude, it will not be 6 o'Clock there, 'till it is Midnight at *London*.

1735, *March 27*, 41' past 10 Morning the Moon is Eclipsed in *Libra* 17 deg. 5 digits on the North side, Visible to *Mardelzur*, to the Northern Parts of *America*, to the Eastern Parts of *China*, to the *Japan-Isles*, and the Islands adjacent in the East.

*April 11*, near Midnight, the Sun is Eclipsed in *Taurus* 2 degrees, and is at that time Vertical near *West Padro* in the great Ocean, between *America* and *China*; 8 Digits on the South side Lat. 11 deg. North Longitude from *London* 180 deg. East or West, it being the half of the Earth's Circumference 12 h. in Time.

*October 5*, at 40' past 2 Morning, the Sun is Eclipsed in *Libra*, 22 deg. 9 Digits on the North side, Visible and Vertical to the Sea between *Terra-de-Papas* and *New Holland* in 9 deg. South Latitude, and Longitude 140° East from *London*, which gives 9 h. 20'.

1736, *March 1*, at 3, Afternoon the Sun is Eclipsed in *Pisces*, 22 degrees, 2 Digits on the North side; then Vertical to *Brazil* in *America*, Latitude South 3 deg. Longitude West 50°, 3 Hours 20'.

*March 31*, at 7, in the Morning, the Sun is Eclipsed in *Aries*, 22 degrees. It will be but a very small *Deliquium* on the South side of the Sun, Visible in the *Antartic Circle*, Vertical to the Southern parts of the *East Indies* near *Calecut*; Latitude 14 deg. North, Longitude 77 deg. East, 5 h. 8' in Time.

*August 25*, at 9, in the Morning the Sun will be Eclipsed in *Virgo*, 13 deg. near 3 Digits on the South side. The Sun will be then Vertical to *Abyssinia*, not far from the South Entrance into the Red Sea; but the Eclipse will only be seen in the Lat. 64 deg. South, that is, in the unknown Sea, and Longitude 40 deg. East, 2 h. 40'.



September 23, at 44'. past 5, in the Afternoon the Sun is Eclipsed in *Libra*, 11 deg. 1 Digit and a half, seen in the Latitude 66 North, Longitude West 95, 6 h. 20'. The Sun is then Vertical to *Mardelzur*.

1737, March 5, at 16'. past 4, in the Afternoon, the Moon is Eclipsed in *Virgo*, 25°. 6 Digits on the South side; seen by all *Asia*, the Eastern Parts of *Africa*, and Northern Parts of *Europe*, Vertical to the Southern Parts of *Borneo*, Latitude 5 deg. North Longitude 11° East, 7 Hours 40'.

August 15, at 1, in the Morning, the Sun is Eclipsed in *Virgo*, 3°. This will be no where Total; The Sun is Vertical to the Ocean, East of the *Philippine* Islands; and in the Sea between *Van Diemens* Isles, and *Zealandia Nova*, the Eclipse will be most Conspicuous.

1738, February 7, at 4, in the Afternoon, the Sun is Eclipsed in 29°. *Aquarius*, and is then Vertical to the Country of the Amazons in *South America*. It will be a great Eclipse in it self; for all the *Penumbra* will fall within the Earth's Disk. It will be very conspicuous to the *Caribbe* Islands and Places adjacent, about the Latitude of 14 degrees North Longitude 60 deg. West, 4 Hours.

1739, January 28, at 4, in the Morning, the Sun is Eclipsed in *Aquarius*, 19 deg. 9 Digits. The Sun will be then Vertical a little to the West of *Hollandia Nova*, Latitude 45 deg. South, Longitude 110 deg. East, 7 h. 20'.

July 9. at 4, the Afternoon, the Moon is Eclipsed in *Capricornus*, 27 degrees; she is Vertical to the Middle of *Hollandia Nova*, Lat. 20° South, Longitude 126 East, 8 h. 24'. Digits on the South side.

1740, *January 17*, at 8 at Night, the Sun is Eclipsed in *Aquarius* 8 Degrees, one Digit on the South side, Vertical to *Mardelzur*, Latitude 18 South, Longitude 120 West, 8 Hours.

*June 13*, at 2 in the Morning, the Sun is Eclipsed in *Cancer*, 3 Degrees, Vertical to the Oriental Sea, East of *China*, 6 Digits on the South side, Latitude 23° North, Longitude 171° 11 h. 16'.

*June 28*, at 9 in the Forenoon, the Moon is Eclipsed in 17 Degrees of *Capricorn*, 13 Digits, seen by almost all *America*, Vertical to *Mardelzur*, Latitude 22 Degrees South, Longitude 124 West, 8 Hours, 16 min.

*December 7*, at 11 at Night, the Sun is Eclipsed in *Sagittary* 27 Degrees, and is then Vertical to the great Southern Ocean, Lat. 23 South, Long. 170 West, 11 h. 40'.

1741, *June 2*, at 10 in the Morning, the Sun is Eclipsed in *Gemini*, 22 Degrees, then Vertical to the Southern Parts of *Egypt*, Latitude 22 North, Longitude 33 East, 2 h. 12'. This Eclipse is Total, and will be seen by the *Ethiopians*, and the adjacent Places.

*November 27*, at 6 in the Morning, the Sun is Eclipsed 16 Degrees in *Sagittary*. This will be a very great Eclipse, Total and Central, seen in *China* and all the Eastern Countries. The Sun is then Vertical to the great unknown Ocean, East of *Madagascar*, Latitude 23 South, Longitude 80° East, 5 h. 20'.

1742, *May 8*, near Noon, the Moon is Eclipsed in *Scorpio* 28 Degrees, 4 Digits on the South side. She is then Vertical to the great unknown Ocean, South of *Mardelzur*, Latitude 20 Degrees South, Longitude 180 Degr. 12 h.

May 22, at 12 at Night, the Sun will be Totally Eclipsed in *Gemini* 12 Degrees, Visible to our Antipodes, and to all that unknown Ocean.

November 1, at Noon, the Moon is Eclipsed in *Taurus*, 20 Degrees, 3 Digits on the North side, Vertical to the great Ocean between *China* and *America*, where it will be Visible, and to all the Eastern Islands beyond *China*, to *California*, and some Parts of North *America*.

November 16, at 6 in the Morning, the Sun is Eclipsed in *Sagittary* 5 Degrees, Visible and Vertical to the Oriental Ocean. This Eclipse is partial, part of the Penumbra only falling within the Earth's Disk.

1743, April 13, at 9 in the Morning, the Sun is Eclipsed in *Taurus* 4 Degrees, 2 Digits, Visible to the South Sea beyond the *Cape of Good Hope*, Vertical to the Middle of the *Abissine* Land, to the West of the Red Sea.

April 27, at 3 in the Afternoon, the Moon is Totally Eclipsed in *Scorpio*, 18 Degrees, Vertical to *Hollandia Nova*, Visible to *Persia*, *East India*, *China*, and the Isles adjacent, to *Tartary*, &c.

May 12, at 6 at Night, the Sun is Eclipsed in *Gemini*, 2 Degrees, 3 Digits on the North side. The Sun then Vertical to the Bay of *Honduras*, West of *Jamaica*, mostly seen in the Northern Parts of *America*.

October 6, near 3 in the Afternoon, the Sun is Eclipsed in *Libra* 24 Degrees, near 2 Digits on the North side, then Vertical to *Brasil* in *America*, mostly seen in *North America*.

November 5, at 6 in the Morning, the Sun is Eclipsed in *Scorpio* 23 Degrees, then Vertical to the Oriental Ocean, South West of *Sumatra*; it will be but a very small Eclipse, and seen about the Antarctic Circle.

1744, *April* 1, near 10 at Night, the Sun is Eclipsed in 23 Degrees of *Aries*, about 6 Digits on the South side, seen in the great Ocean West of *America*, the Sun Vertical in Latitude 9, North, Longitude 142 West, 9 h. 28'.

*September* 25, at 1 in the Morning, the Sun is Eclipsed in 13 Degrees of *Libra*, 7 Digits on the North side, Visible in the Ocean East of *Tartary*, Vertical to *Mardelzur*, Latitude 5 South, Longitude 142 East, 9 h. 20'.

*October* 10, a little past Noon, the Moon is Eclipsed 6 Digits on the South side in *Aries* 28 Degrees, Vertical to the great Ocean East of *China*, in 11 Degrees North Latitude, and 173 Degrees East Longitude, 11 h. 32'. It will be Visible to part of *East India*, *China*, *Japan*, *Tartary*, to all the great Ocean between those Places and *America*, where some part of the North West of that Continent will see it.

1745, *March* 22, near 3 in the Morning, the Sun will suffer a great Eclipse in *Aries*, 12 Degrees, Visible in *China*, and all the adjacent Places. The Sun is Vertical to the *Philippine* Islands, Latitude 5 Degrees North, Longitude 135 East, 9 h.

*September* 14, at 5 in the Afternoon, the Sun will be Totally Eclipsed in *Libra* 2 Degrees, 7 Digits on the South side. The Sun is then Vertical to the North Parts of *Peru* in *America*, Latitude 0 Degr. 33', Longitude 76 West, 5 h. 8'; in the Northern Parts of which Country it will be Total.

1746, *February* 24, at 44' past 3 in the Afternoon, the Moon is Eclipsed 9 Digits on the South side, in *Virgo* 17 Degr. She is then Vertical to the *Indian* Sea, between *Ceylon* and *Sumatra*, in Latitude 5 Degrees North, Longitude 90 Degr. East, 6 h. It will be Visible

visible to all *Asia*, part of *Africa*, and part of *Europe*, about 6 Degrees East from *London*; the Moon will Rise as the Eclipse Ends.

*March* 11, at 3 in the Morning the Sun is Eclipsed 6 Digits in *Aries*, 1 Degree; it will be most Conspicuous on the East Borders of *Tartary*.

*September* 4, at 9 in the Morning the Sun is 5 Digits Eclipsed on the South side, in *Virgo* 22 Degrees; Vertical or directly over the Eastern Parts of *Ethiopia*, Latitude 3° North, Longitude 51 East, 3 h. 24'.

1747, *January* 29, at 3 in the Afternoon the Sun will be Eclipsed in *Aquarius*, 21 Degrees, Vertical to *Brazil*, Latitude 14 Degrees South, Longitude 50 Degrees West, 3 h. 20'.

This will be a very small Eclipse, Visible near the Antarctic Circle.

*February* 28, at 5 in the Morning the Sun is 1 Digit Eclipsed on the North side, in *Pisces*, 20 Degrees; he is then Vertical to the *Indian* Sea between *Bornio* and *Java*, Lat. 4 Degrees South, Long. 110 East, 7 h. 20'. seen in *Greenland* and Places adjacent.

*July* 26, at 50' past 8 in the Morning the Sun is 1 Digit Eclipsed in *Leo* 13 Degrees, Vertical to *Arabia Felix*, Latitude 17 Degrees, Longitude 41 Degrees East, 3 h. Visible in the North frozen Sea, Latitude 80 Degrees.

*August* 9, at 10 in the Forenoon, the Moon is Totally Eclipsed, thus, 17 Digits, in 27 Degrees *Aquarius*; she is then Vertical to *Mardelzur*, Latitude 12 Degrees South, Longitude 146 Degrees West, 9 h. 44'. Visible to the *Japan* and *Philippine* Islands, to all the West Ocean between *Asia* and *America*, as also to all the Western Parts of *America* from South to North, including *Jamaica*, *Cuba*, *Carolina* and *Virginia*; the Horizon of the Visible Disk passeth thro' *Pensilvania*, &c.

August 24, at 9 at Night the Sun is Eclipsed in *Virgo*, 12 Degrees. This is a very small Eclipse, and only seen in the unknown Southern Parts of the World.

1748, January 19, at 3 in the Morning the Sun is Eclipsed 5 Digits on the South side, in 10 Degrees *Aquarius*, Vertical then to the Eastern Parts of *Hollandia Nova*, Latitude 18 Degrees South, 135 East, 9 h. Visible only to the unknown Southern Seas.

February 3, near Noon the Moon is Eclipsed in *Leo* 25 Degrees, five Digits on the North side; she is Vertical to the great Ocean East of *Japan*, Latitude 13 Degrees North, Longitude 180 Degrees, 12 h. seen in *China*, in part of *Tartary*, and in the North West Parts of *America*.

1749, January 7, at 7 at Night, the Sun is Eclipsed, scarce one Digit, in *Capricornus* 29 degrees. Seen in the Northern Parts of *America*.

June 19, between 9 and 10 in the Forenoon, the Moon is Eclipsed, but one Quarter of a Digit. It may be seen at the Eastern Islands, and almost all *America*.

July 3, at 31' past Noon the Sun is Eclipsed near 10 Digits on the South side, in *Cancer*, 22 degrees; Vertical to *Barbary*, Latitude 22 degrees North, Longitude 7 West, 28'.

It will be seen by those that Sail to *East India*, in the Seas about the *Cape of Good Hope*, that is, if the Air be clear, the more Southward they sail the more digits they will see Eclipsed.

1750, June 22, at 51' past 6 at Night the Sun is 6 Digits Eclipsed in *Cancer*, 11 Degrees, Vertical to the North West Parts of *New Spain* in *America*. Seen in the Straits of *Magellan*.

November 18, at 1 in the Morning the Sun is Eclipsed in *Sagittarius* 7 Degrees. It will be very small, scarce worth taking Notice of, Visible about the Antarctic Pole.

December 17, at 7 at Night the Sun is Eclipsed 2 Digits on the North side, in 7 Degrees of *Capricornus*, Vertical then to the Pacifick Ocean, Latitude 23 South, Longitude 105 West, 7 h. most seen in *North America*.

1751, May 14, at 1 in the Morning the Sun is Eclipsed 7 Digits on the North side, in *Gemini*, 3 Degrees; and is then Vertical to the Oriental Sea, Latitude 21, Longitude 164'. East, 10 h. 56'. seen only about the Arctic Circle.

November 7, near 1 in the Morning, the Sun is Eclipsed in *Scorpio*, 25 Degrees; he is then Vertical to the Ocean East of *New Holland*, Latitude 19 South, Longitude 170 Degrees East, 11 h. 20'. only Visible in the unknown Southern Seas.

1752, May 2, at 6 at Night the Sun is Eclipsed in *Taurus* 23 Degrees, Vertical to the Bay of *Honduras* in *North America*, where it will be Total; and more Southerly, it will be still greater, to those 87 Degrees West of London.

October 26, at 2 in the Morning the Sun is Eclipsed in *Scorpio* 14 deg. Vertical to a little Sea East of *Terra Carpentaria*, Latitude 16 Degrees South, Longitude 148 Degrees East, 9 h. 52', near which Place it will be Total, and very formidable to all those Parts.

1753, April 22, at 5 in the Morning the Sun is near 8 Digits Eclipsed on the South side, in *Taurus*, 13 Degrees, then Vertical to the *Arabian* Sea, Latitude 16 South, Longitude 62 Degrees East, Visible in the Oriental Ocean, to *Madagascar*, &c.

October 1, between 9 and 10 in the Forenoon, the Moon will be near 6 Digits Eclipsed on the South side in *Aries* 19 Degrees, then Vertical to the great Ocean West of *America*, where it is Visible, and to almost all *America*.

1754, March 12, at 6 at Night the Sun is 2 Digits Eclipsed on the North side, in *Aries* 3 Degrees, Vertical to a little Sea West of *Terra firma*, Latitude 8 Degrees North, Longitude 90 Degrees West, 6 h. seen in North *America*.

March 27, at 4 in the Morning the Moon is Totally Eclipsed, Digits 21, Vertical to the East Borders of *Peru*, Latitude 6 South, Longitude 70 West, 4 h. 40'. Visible to all *America*, &c.

April 11, at 10 in the Forenoon the Sun is 2 Digits Eclipsed on the South side; in *Taurus* 2 Degrees, Vertical to the Eastern Parts of *Nigritia* in *Africa*, Latitude 12 Degrees North, Longitude 30 East, 2 h. Visible only to the unknown Southern Seas.

September 5, at 1 in the Afternoon the Sun is Eclipsed in *Virgo*, 23 Degrees. This is less than the foregoing Eclipse, the Sun is Vertical to the Eastern Ocean beyond the *Philippine Islands*, Latitude 3 Degr. North, 163 Degrees East 10 h. 52'.

September 20, at 6 in the Morning the Moon is Totally Eclipsed, 21 Digits, in *Aries* 8 Degrees, Visible to all *America*, Vertical to the Sea West of *Panama* in *America*, Latitude 3 Degrees North, Longitude 90 Degrees West, 6 h.

October 5, at 1 in the Morning the Sun is Eclipsed 2 Digits on the North side, in *Libra* 22 Degrees, Vertical to *Mardelzur*, Latitude 8 Degrees South, Longitude 130 West, 18 h. 20'; Visible in the Artic Circle.

It is Remarkable this Year, that there are six Eclipses and all Invisible to any Part of *Great Britain* or *Ireland*.



1755, *March*, 1, near 10 at Night the Sun is Eclipsed 8 Digits on the North side, in *Pisces* 22 Degrees, then Vertical to *Mardelzur*, but little different from the Place in *October* last, Visible on the West Borders of *America* and unknown Ocean.

*August* 26, at 8 in the Morning the Sun is Eclipsed 8 Digits on the South side, in *Virgo* 13 Degrees, Vertical to the *Indian Sea*, Latitude 6° North, Longitude 60 Degrees East, 4 h. Visible to the Southern Seas.

*September* 9, near 11 in the Forenoon the Moon is Eclipsed 8 Digits on the North side, in *Pisces* 17°, then Vertical to *Mardelzur*, Latitude 1° South, Longitude 160° West, 10 h. 4' Visible to all the Northern parts of *America* and *Asia*, to Part of *Tartary*, *China*, and those Eastern Parts.

1756, *February* 19, at 2 in the Morning the Sun is Eclipsed in *Pisces* 11 Degrees, and is then Vertical to *Terra de Papas*, Latitude 7° South, Longitude 146 East 9 h. 44'. This will be a very great Eclipse, Total and Central at *Borneo*.

*August* 14, at 7 at Night the Sun is Totally Eclipsed in *Virgo* 3 Degrees, Vertical to a little Sea West of *New Spain* Latitude 10° North, Longitude 115 West, 7 h. 40'; Visible at *New Spain*, *Jamaica*, *Terra firma* and all the Places near thereunto.

1757, *February* 7, at 1 Afternoon the Sun is 7 Digits Eclipsed on the South side, in *Pisces* 0° 9', then Vertical to the *Ethiopian Ocean* South of *Ascension Island*, Latitude 11 Degrees South, Longitude 14° West, 1 h. Visible in the Ocean above mention'd.

*August* 3, at 11 at Night the Sun is 5 Digits Eclipsed on the upper, or North side, in *Leo* 22 Degrees, Vertical to the *Oceanus Magnus*, Latitude 14 North, Longitude 165 West 11 h. Visible to the unknown Southern Seas.

December 29, at 6 at Night the Sun is Eclipsed near 2 Digits on the North side, in *Capricornus* 19°, Vertical to the Pacific Ocean, Latitude 21 South, Longitude 90 West 6 h. Visible about *Hudson's Bay*, &c.

1758, January 28, 26' past 4 in the Morning the Sun is Totally Eclipsed in *Aquarius* 19 Degrees, Vertical to the Sea, South of the Island *Java* in the *East Indies*, Latitude 15 South, Longitude 110 East, 7 h. 20', Visible in the South Seas.

June 24, at 55' past 8 in the Morning the Sun is Eclipsed 3 Digits on the South side, in *Cancer* 13 Degr. he is Vertical to *Arabia*, a little East of the Red Sea, Lat. 23° North, Longitude 41 East, 2 h. 44'. It may be seen by those that sail to the *East Indies*, at the *Cape of Good Hope*, &c.

July 9, at 44' past 4 in the Afternoon the Moon is Eclipsed in *Capricornus* 28 Degr. then Vertical to the Sea, West of *New Holland*, Latitude 21 Degrees South, Longitude 107 East, 7 h. 8', Visible to all the South East Parts of *Africa*, to *Madagascar*, to *Turkey* in *Asia*, to *Tartary*, *Persia*, *China*, and to all the Islands adjacent; this Eclipse will be Total with Continuance, Digits 15.

December 20, at 30' past 7 in the Morning the Sun will be Eclipsed 6 Digits on the North side, in *Capricornus* 9 Degrees, and then Vertical to the Oriental Ocean East of *Madagascar*, Latitude 23 South, Longitude 67 Degrees East, 4 h. 26'; seen in *Persia* and *Great Tartary*.

1759, June 13, at 13 past 5 in the Afternoon the Sun is Eclipsed in *Cancer* 3 Degrees, Vertical to the Sea a little North, of the great Island *Cuba*, Latitude 23 Degr. North, Longitude 80 Degr. West, 5 h. 20'. This Eclipse will be Total, and Visible to *South America*, &c.

December 8, at 14<sup>l</sup> past 2 in the Afternoon the Sun is Eclipsed in *Sagittarius* 27 Degrees, he is then Vertical to the Sea a little East of Cape Frio in *Brasil*; Latitude 23 Degrees South, Longitude 33° West, 2 h. 12'. This Eclipse is Total and Central to the Southern Parts of *America*.

1760, November 26, at 2 in the Afternoon the Sun is Eclipsed in *Sagittarius* 16 Degrees; Vertical to the East of *Brasil*, Latitude 23° South, Longitude 30 East, 2 h. Visible in the Southern Seas, 6 Digits on the South side.

1761, April 23, 40' past 5 Afternoon the Sun will be Eclipsed near one Digit on the South side, in *Taurus* 15°, then Vertical to the North-East Coast of *New Spain*, Latitude 17°, Longitude 85° West, 5 h. 40<sup>l</sup>; Visible in the Southern Parts of the World, near the Straits of *Magellan*.

May 23, at 1 in the Morning the Sun is Eclipsed 2 Digits on the North side, in *Gemini* 13°, then Vertical to the Oriental Sea, Latitude 22 Degr. North, Longitude 165 East, 11 h. Visible only to the Northern Frozen Seas.

October 16, at 30' past 10 at Night, the Sun is Eclipsed, scarce one, Visible in the Artic Circle.

November 1, near Noon, the Moon is Totally Eclipsed in *Taurus* 20 degrees, then Vertical and Visible to the great Ocean between *Asia* and *America*; also seen in *Persia*, *China*, Great *Tartary*, all the Eastern Islands, and in the North-West Parts of *America*.

November 15, at 2 in the Afternoon the Sun is Eclipsed in *Sagittary* 5 degrees. This is a very small Eclipse, hardly worth taking notice of; it is seen in the Antarctic Circle.

1762, April 13, at 28' past 5 in the Morning, the Sun is Eclipsed 9 digits on the South side in *Taurus* 4 degrees

degrees, then Vertical to the Southern Parts of *India* beyond the *Ganges*, Lat. 30 degrees North, Long. 100 East, 6 h. 40', Visible in the Oriental Ocean.

1763, *April* 2, at 15' past 10 in the Forenoon, the Sun is Eclipsed in *Aries* 23 degrees, then Vertical to *Æthiopia*, Latitude 9 degrees North, Longitude 29 East, 1 h. 44'. This Eclipse will be Total and Central, conspicuous to all *Africa*, and part of *Asia*.

*Sept.* 26, at 1 in the Morning, the Sun is Eclipsed in *Libra* 13 degrees; he is then Vertical to the Eastern Ocean, Latitude 5 degr. South, 170 East Longitude, 11 h. 8'. This is also a Total Eclipse, but not Central. It will be little seen, by reason it falls so remote from any known Country.

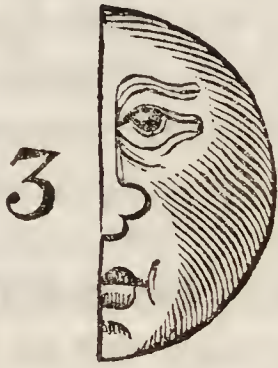
This general View of Eclipses, I hope, will satisfy the Curiosity of the Courteous Reader: For (in my Opinion) a more particular Account of them wou'd be rather tedious than entertaining.

*Note*, that the North side of the Moon is the upper side, as view'd by us; and the South side, the lower side: For if the Moon has South Latitude, the Sun's Eclipse is on the South, or lower side; but the Moon's Eclipse is always on the contrary side. If her Latitude be South, her North, or upper side is obscur'd: But if her Latitude be North, the Eclipse is on the South side. The Moon's Eclipse begins on the East side, and the Sun's Eclipse on the West side.

The several Faces of the Moon.



1



3

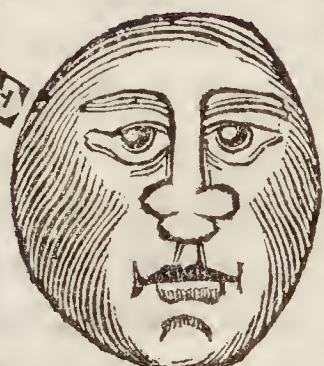


7



6

4



5



N

These

These are the several Faces the Moon makes at us ; but she always looks with a pleasant full Face towards the Sun, and good reason Why ? Because all the Luster of her Opake Visage is borrow'd from that glorious Planet : And when she is depriv'd of that, (I mean Eclipsed) she then puts on her Widow-Dress and mourns for the Loss of his Countenance : But not Staggering in the dark, she still pursues her Course till she again repossess her precarious Glory.

The Figure 1. represents the New Moon, when it is in Conjunction with the Sun ; the dark Side of her Body is then towards the Earth (as *per* Figure) and so is Invisible. From the Change to the first Quarter, she is falcated, or bent like a Sickle, as in Figure 2.

In the first Quarter she is Dichotomized, or cut just in two, and has then half of her Light, as in Figure 3.

From the First Quarter to the Full, she is Gibbous, or in her Gibbosity ; that is, Abunching out as represented by Figure 4.

In the Full Moon the Enlightened Part which is towards the Sun, is turned towards the Earth ; therefore appears with a full Face, as is plain in Figure 5.

From the Full to the last Quarter, she is again in her Gibbosity bunching out on the other side, as in Figure 6.

In the Last Quarter she is again Dichotomized ; and that side that was in darkness at the First Quarter, is Enlightned, as in Figure 7.

From the Last Quarter to the Change, she is again falcated on the other side, as in Figure 8.

And these Various Phases the Moon shews to the Inhabitants of the Earth about (according to her middle Motion) 29 Days and a half.

The Sun and the Earth are plain to any Eye, without being figured. The Earth is the true Stereographical Projection of the Sphere to the Elevation of the Pole

Pole at *Edinburgh* ; where P represents the North Pole, S the South Pole ; and upon these Poles, or Axis, the World is suppos'd to turn ; because they are the only Points in the Whole Frame of Nature that seem to be fix'd.

Z represents the Zenith, or the Point just over our Heads, N the Nadir, or that Point in the Heavens, which is directly under our Feet diametrically opposite to the Zenith.

The Line, Z N, is the prime Vertical, or East and West Azimuth, upon which the Sun is at 6 o'Clock, when he is in the Equinoctial,  $\text{Æ} \text{Æ}$ .

$\text{☉}$ , represents the North Tropic Line, in which the Sun enters the 10th of *June*, and Rises near H, on the Right Hand, where you see that Line cut the Horizon, and is upon the Line P S, at 6 o'Clock, and comes up at Noon to  $\text{☉}$ .

When the Sun comes to this Line (P S) it is always 6 o'Clock, whether it be above, or below the Horizon.

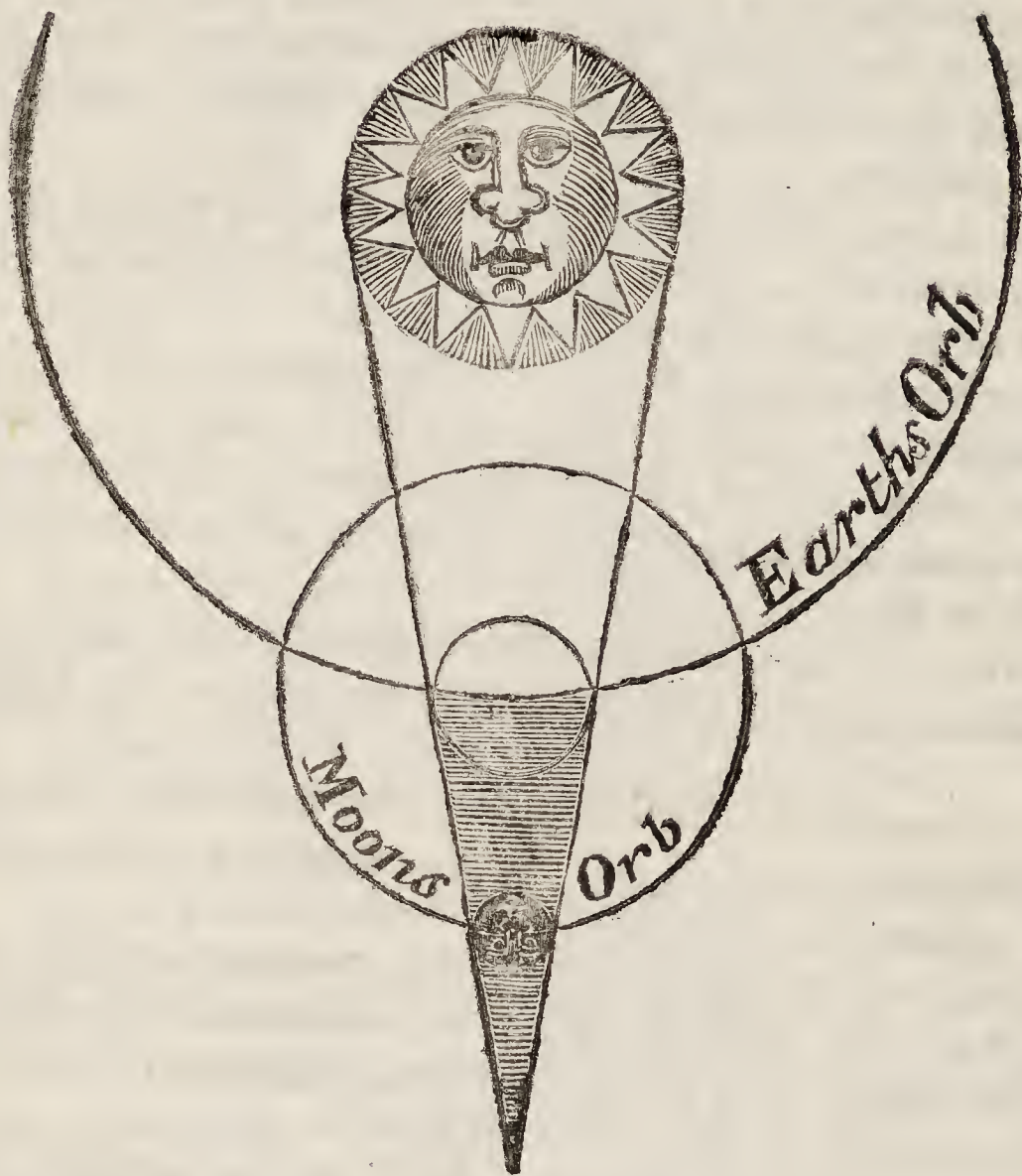
H H represents the Horizon ; the light Part above the Horizon is called the *Visible Hemisphere* ; the dark part under, the invisible.

$\text{☽}$ , represents the South Tropic, where the Sun enters about the 10th of *December*, and then Rises where you see this Line cut the Horizon ; and is at Noon a little above H on the Left Hand.

The broad Circle between the Tropics is call'd the *Ecliptic*, or the *Sun's Path* ; thro' the middle of which passes the Equinoctial Line.

North and South of the Tropics are the Temperate Zones, in the Northern of which we live ; and next to the Temperate Zones are the Polar Circles, &c.

## A Type of the Moon's Eclipse.



**T**HIS Diagram represents the Manner in which the Moon is Eclipsed: The Moon respects the Earth for her Center, and moves round it once every Month. Now the shadow of the Earth extending it self far beyond the Moon's Orbit, must of necessity sometimes fall in the Moon's Way; and this happens when she is within 12 Degrees of either of her Nodes, commonly call'd the *Dragon's Head* and *Tail*; and when the Sum of the Moon's Latitude and Diameter are



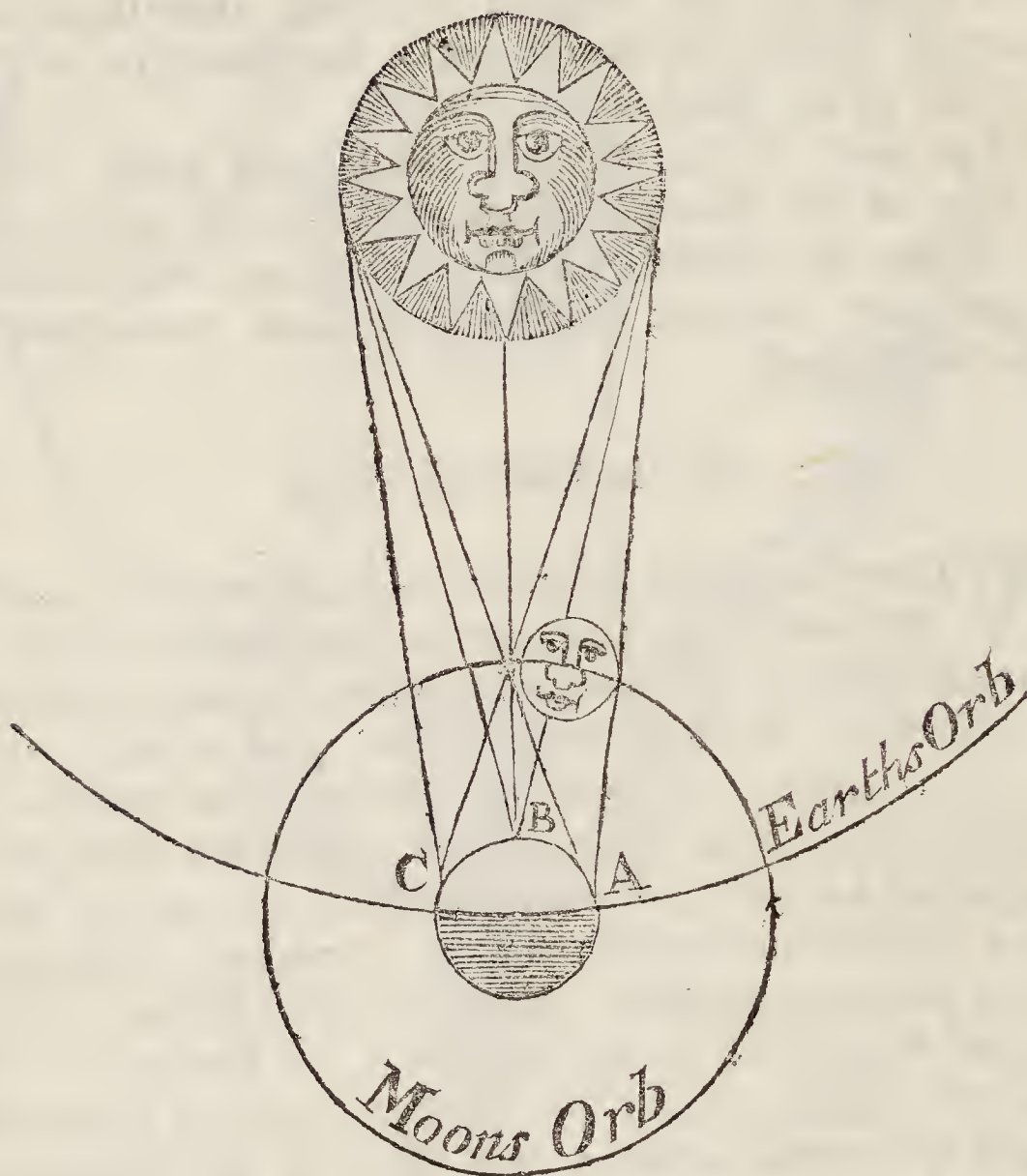
are less than the Diameter of the Earth's Shadow, then she continues Totally dark, sometimes above an Hour and a half: But when the Sum of the Moon's Latitude and her Diameter are equal to the Diameter of the Cone of the Earth's Shadow, then she is no sooner all Immerged into it, than she Emerges on the other side of the Shadow.

When part of the Moon's Body only passes thro' one side of the Shadow, then the Eclipse is partial; but if she be above 12 Degrees from her Nodes, she passes by without touching it, and consequently suffers no Eclipse.

### *Of the Harvest-Moon.*

**W**Hen the Moon happens in Apogee, or greatest distance from the Earth, North Latitude, in a Sign of Short, or Oblique Ascension; she then Rises (in the Northern Hemisphere) within 9 or 10 min. two Nights together. When the Moon is in a Sign of Oblique Descension, (in or about *August*) in Apogee, and South Latitude, she may possibly set to the Northern Inhabitants within 10 or 12 minutes difference 2 or 3 Nights together. But when the Moon is in a Sign of Right, or Long Ascension, in Perigee, and South Latitude, there will be then above an Hour and a half difference between the time of her Rising one Night, and that of the next Night, to the Inhabitants of *Great Britain*. And if the Moon has North Latitude, in a Sign of Right, or Long Descension, and in Perigee, or Least Distance from the Earth, she then sets an Hour and a half Later, &c.

## A Type of the SUN's Eclipse.



**T**Hat the Sun's *Eclipse* is Total to one part of the Earth, to another partial, and to a third at the same time no Eclipse at all, is proved from this Figure. An Observer at A sees the Sun Totally Eclipsed; one at B sees him half Eclipsed; but one at C sees no Eclipse at all.

The Names and Characters of the Sun, and the 7 Planets.   
 Sun ☉, Saturn ♄, Jupiter ♃, Mars ♂, Earth ☉, Venus ♀,   
 Mercury ☿, Moon ☾.

The Greatest and Least Distances of the Planets from the Sun, and from the Earth, in English Miles.

From the Sun.		From the Earth.	
♃	{ Greatest 607.465.956 Least 541.946.387	♃	{ Greatest 608.227.429 Least 542.625.730
♄	{ Greatest 353.520.704 Least 320.996.275	♄	{ Greatest 353.964.314 Least 321.399.072
♅	{ Greatest 146.001.785 Least 121.156.610	♅	{ Greatest 122.440.568 Least 101.604.764
♆	{ Greatest 110.467.018 Least 106.791.012	♆	{ Greatest 110.467.018 Least 106.791.012
♁	{ Greatest 94.347.947 Least 9.347.947	♁	{ Greatest 134.017.363 Least 15.165.311
♂	{ Greatest 80.353.739 Least 52.914.839	♂	{ Greatest 97.171.952 Least 37.988.985
♁	{ Greatest 110.756.016 Least 106.567.876	♁	{ Greatest 258.998 Least 223.130

When the Earth is at a mean Distance from the Sun, the Cone of the Earth's Shadow is 214 Semi-diameters of the Earth, equal to 852700 English Miles.

The Earth's Circumference	25035	} English Miles.
The Earth's Diameter	7969	
Height of the Atmosphere	47	

Of the Magnitudes of the Planets.

Saturn is two hundred and ninety eight times greater than the Earth; Jupiter is, five hundred and seventy seven times greater than the Earth; Mars is, fifteen times lesser than the Earth; the Sun, is two hundred fifty eight thousand three hundred and nine times greater than the Earth; Venus is three times lesser than the Earth; Mercury is twenty seven times lesser than the Earth; the Moon is fifty times lesser.

*The Explantion of the following System.*

**T**HIS System was first invented by *Phythagoras* the *Samian*, who flourish'd 509 Years before the Birth of Christ ; but after his time it lay dormant 'till *Nicholas Copernicus* revived it, from him call'd the *Copernican System*. It's likewise called the *Solar System* ; because *Sol*, or the *Sun* is placed in the Center. It has now gain'd the Esteem of the Learned Part of the World.

The *Sun* is in the Center, that great and glorious Fire of the Universe, ever burning, but not consuming, plac'd there by our Wise Creator, to impart it's reviving Rays, Light and Heat to the other Parts of the Visible Creation : For the *Earth*, and all the other Stars borrow their sparkling Luster from the *Sun*. One side of the *Earth* being always enlightened, it appears to the other Stars, as they do, the Earth.

The *Sun* has a Rotation upon his own Axis, which he finishes in twenty five Days and a quarter : Next to the *Sun*, is *Mercury* ; He makes one Revolution round the Sun in his Orbit in 87 Days, 23 Hours, 15 Minutes. His Daily Motion is 4 Degrees, 5 Minutes. *Mercury* keeps always so near the Sun, and shines with so great a Luster, that his Spots cannot be discover'd, by which Reason his Rotation cannot be certainly determined. But it is very Rational to conjecture, that he has some Spots, as well as his Fellow-Creatures ; for the brightest of all Visible Creatures (I mean the *Sun*) is not without Spots : And indeed when I look over the brightest of my own Acquaintance, I can find none without Spots : But by the bye, I wou'd have you to know, that all Spots are not Blemishes, but very much contribute to the Perfection and Beauty of a great many Creatures of several Species.

*Mercury* according to his mean Motion, is conjoin'd with the *Sun* once in 115 Days ; he is never above

28 Degrees from the *Sun*. Next above *Mercury*, is *Venus*; Vulgarly call'd the *Morning* and *Evening-Star*: She is the most splendid of all the Planets; rolls round the *Sun* in 224 Days, 16 Hours, 49 Minutes: Her mean Daily Motion is 1 Degree 36', and turns round her Axis once in 23 Hours: She is conjoyn'd with the *Sun*, according to her middle Motion, once in 584 Days, never found above 48 Degrees from the *Sun*.

By the Motion of these two Inferior Planets, we are very well assur'd of the Earth's Motion: For if their Orbs circumscrib'd the Earth's Orb, then once in every Revolution, the Earth wou'd interpose between them and the *Sun*; but such a Phenomenon has never been observ'd.

See the Learned Mr. *Char. Leadbetter's System of the Planets demonstrated*.

Next above *Venus*, is the *Earth* with the *Moon* moving round it. The Earth performs one Revolution round the *Sun* (and her Handmaid the *Moon* along with her) in 365 Days, 5 hours, 49'. The Earth has a second Motion upon her Axis, from West to East, which she performs in 24 Hours: This is the cause of Day and Night, (and according to appearance) the Rising and Setting of the heavenly Bodies.

A Third Motion the Earth has, which is from South to North, and from North to South, which in respect of the Equinox, is the cause of Summer and Winter.

The *Moon* moves round the Earth in 27 Days, 7 h. 43<sup>l</sup> in which time she turns upon her own Axis. Next above the Earth, is *Mars*, of a red fiery Colour, moves round the *Sun* in one Year, 321 Days, 23 Hours, 27 Minutes; according to which middle Motion, there are two Years, and fifty Days between every Conjunction with the *Sun*.

*Jupiter* is next above *Mars*, with his four Attendants, called *Satellites* or *Moons*, with which he moves round the *Sun* in his Orbit in 11 Years, 317 Days, 12 h. 20<sup>l</sup> According to which motion, in 398 Days he is in

Conjunction with the Sun; his mean daily Motion is 5' his Shadow does not reach *Saturn's* Orbit. He is observed with Rings or Belts round him, &c.

*Note*, That the Planets are not placed in the System according to their true Distances, (for the smallness of the Page wou'd not permit it without Crouding *Mars* and the Inferiours Planets too near the Center;) And that the Shadow of *Jupiter* does not reach the Orbit of *Saturn*, tho' in this Diagram it goes beyond it. But the Distances of the Planets from the Sun and from the Earth being already given, sufficiently supplies what cou'd not be distinctly done in the System.

The Length of the natural Day in each Planet is equal to the time of their Rotation about their Axis.

*Saturn* is the Highest Planet in the System, and moves slowly round the Sun with his five Moons about him, in the space of 29 Years, 174 Days, 6 h. 36'; his Daily motion is two minutes; and every 378 Days is conjoin'd with the Sun: His Spots cannot be seen, because of his Immense Distance from us; whereby to determine his Rotation; but by some Astronomers he is supposed to turn round upon his Axis in 29 Days, 10 h. 1'.

Besides what is above said, *Saturn*, *Jupiter* *Mars*, *Venus* and *Mercury* have a Direct, and a Retrograde Motion.

A Planet is said to be Direct, when it moves according to the right Order of the Signs from *Aries* to *Taurus*; and Retrograde, when it seems to go back from *Aries* to *Pisces*: And upon the turn between these contrary Motions, the Planet is said to be Stationary, or at a stand.

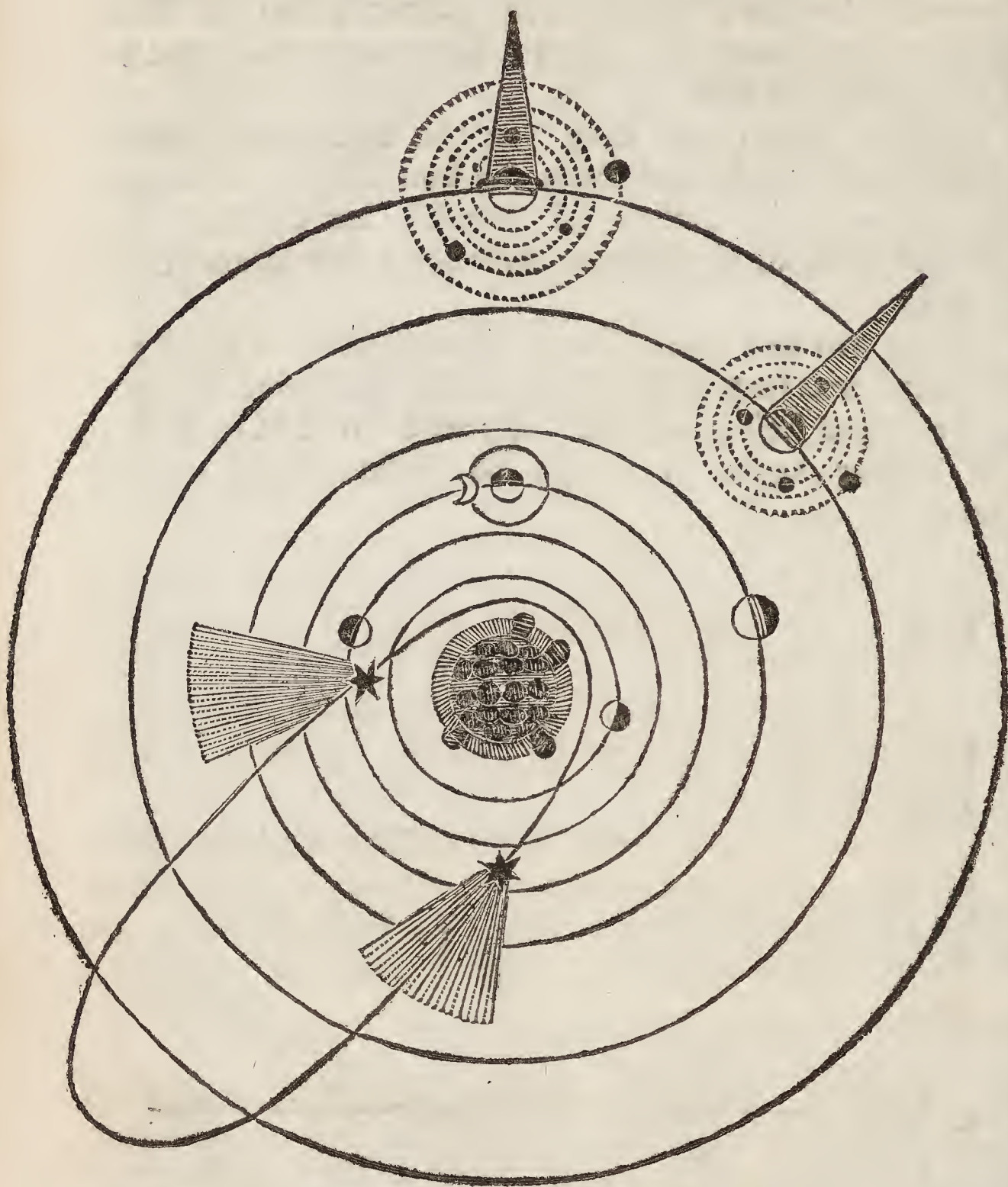
But in Reality these Planets go always Direct, as well as the Earth and the Moon; and this Retrograde Appearance to us is caused by the Earth's motion.

*Mars* and *Venus* are observed to have their Increase and Decrease of Light as well as our Moon.

The Comets, or what we call *Blazing Stars*, by Astronomers are found to be of the same Species with the other Planets; they move round the Sun in Ellipsis or Oval, and are always seen with their Tails turn'd from the Sun.

In this *System* you may see the manner of their Descent to, and Ascent from the Sun: They remove far beyond the System of *Saturn*; but descend at different Periods of times to visit the other Planetary Worlds.

There will be a *Comet* seen in *Great Britain* in 1758; this *Comet* was seen in the Year 1682, its Period being 75 Years and half; another appear'd in 1661, and will appear again in 1789, its Period being 129 Years.



**RULES** to find the common Notes of the Year, and to continue the Changes and Eclipses.

For the Golden Number.

**O**NE was the Golden Number the Year our Saviour was born: Therefore to find this Number for any Year proposed, you must add 1.



*Example,* To the first Year of our Lord, I add 1, the Golden Number is 2, &c. Now when the Year and 1 added exceed 19, the Sum must be divided by 19; the Remainder is the Golden Number, and the Quotient shews the Revolutions the Sun and Moon have made since the Birth of Christ.

*Example 2.* For 1734, add 1, 1735, which I divide by 19.

19) 1735 (91 the Quotient is 91  
 171   Revolutions since the Birth of Christ  
 -----  
       25  
       19  
       -----

Rem.     6 Golden Number for 1734.

When nothing remains, 19 is the Golden Number; because that is the Last Year of the Revolution. See Page 13.

For the *British* Epact, Multiply the Golden Number by 11; if the Product is under 30, it is the Epact for the Year proposed; But if the Product exceed 30, divide the Sum by 30, the Remainder is the Epact.

*Example,* For 1734, Golden Number 6. Multiplied by 11, gives 66, divide by 30) 66 (2. Remain 6, Epact.

For the *Roman* Epact. Now because they are 11 Days before us, (See Page 8.) you must Subtract 11 from the *British* Epact, and the Remainder is the *Roman* Epact: But when Subtraction cannot be made, add 30.

*Example* for 1734. The *British* Epact 6; because I cannot subtract 11 from 6, I add 30, the Sum is 36; from

from which I take 11, and there remains 25, the Roman or Gregorian Epact.

*Example 2.* 1798, the *British* Epact 23; from which take 11, remains 12, *Roman* Epact. See Page 23.

For the *British* Dominical Letter. Divide the Year of our Lord by 4; then add the Quotient, and 4 to the Year, and divide the Sum by 7; the last Remainder subtract from 7, gives the Number of the Letter.

For Example,	4)1734(433---Rem. 2	----
	433	----
Add	4	
	-----	7
	7)2171(310---Rem. 1	---
	Equal to	F---6

See Page 7.

But when no Remainder happens, 7 is the Number of the Letter.

*Note,* After the first Division, if nothing remains, it is Leap-Year; if 1 remains, the first after; if 2, the second; if 3, the third after Leap-year.

For the *Roman* Letter. Divide the Year by 4, and the Year, and its fourth part by 7, and the last Remainder subtract from 7, gives the Number of the Letter.

<i>Example.</i>	4)1734(433---Rem. 2
	433
	-----
	7)2167(309
	4 Rem. 4.

Rem. 3 or C. See Page 9.

The

The Letters must be thus number'd :

1	2	3	4	5	6	7
A	B	C	D	E	F	G.

For the Cycle, or Circle of the Sun. Add 9 to the Year of our Lord, divide the Sum by 28, the Remainder is the Cycle of the Sun.

<i>Example.</i>	1734
Add	9
	-----
	28) 743(62
	168
	-----
	63
	56
	----
Rem.	7 Cycle of the Sun.

9 Being the Circle of the Sun the Year our Redeemer was born, I wou'd know what Day of the Week it was on? To find which, I must look for 9 under the Title *Cycle of the Sun* in the first Table, Page 4, and against 9 under *December* is *Wednesday*; entering the next Table with *Wednesday*, I find the 25<sup>th</sup>, of *December* fell on *Saturday*, which was the Sabbath. On which Day the Lord of the Sabbath condescended to be born.

Again, entering the Table, Page 7, with 9, Cycle of the Sun, I find the Dominical Letter (it being Leap-Year) to be DC; now I enter the Table, Page 21, with C, and Golden Number 1, (as before mention'd) by which I find the Number of Direction to be 21; from which I Subtract 10; the Remainder is *Easter Day* in *April 11*.

*Example 2.* I wou'd know the Cycle of the Sun the Year of Christ 33 ; to which I add 9. Sum is 42.

$$\begin{array}{r}
 28) 42 (1 \\
 \underline{28} \\
 \text{-----} \\
 \text{Remains} \quad 14 \quad \text{Cycle of the Sun}
 \end{array}$$

And by the foregoing Rule I find the third of *April* was the *Friday* on which Day our gracious Lord finish'd the great Work of Redemption, and offer'd himself up a Sacrifice for the Sins of the People, while they were yet his Enemies ! On the fourth Day was kept the Passover of the *Jews*. The fifth Day, which was the first Day of the Week, the Victorious Captain of our Salvation Rose from the Dead, having conquer'd Hell and Death, and all Infernal Powers, and saluted his Disciples with Peace, Life and Immortality ! And in grateful Remembrance of which, his Apostles changed their Sabbath from the Seventh to the first Day of the Week, now properly call'd the *Lord's Day*.

Now this Feast, Vulgarly call'd *Easter*, might more properly be call'd the Christian Passover, or the Resurrection of Christ ; rather than go by the Name of that Concubine of Satan ; (for *Easter* was a Rotten Goddess of the Heathen *Saxons*.)

To find the Age of the Moon, according to her middle Motion. First, look for the Epact for the Year propos'd ; add the Epact, the Month of the Year, and the Day of the Month together : If the Sum be under 30, it is the Moon's Age : But if it exceed 30, divide the Sum by 30, the Remainder is the Moon's Age.

The Months must be Number'd as under written.

0	2	1	2	3	4
<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>Apr.</i>	<i>May</i>	<i>June</i>
5	6	8	8	10	10
<i>July</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Decem.</i>

*Three* E X A M P L E S.

*Jan.* 1, 1734.      *Dec.* 31, 1734.      *Dec.* 31, 1747.

Epact 6	Month 10	Epact 29
Month 0	Day 31	Month 10
Day 1	Epact 6	Day 31

☾'s Age 7	47	div. by 30	(70) 2
Subt.	30		60
☾'s Age 17			10

Moon's Age 10

Having the Age of the Moon, to find her Southing. Multiply the Moon's Age by 4; divide the Product by 5; and as often as you find 5 in it, so many Hours, and every Unite of the Remainder goes for 12 Minutes.

E X A M P L E.

Moon's Age	7
Multiply by ---	4
Divide by ---	5)28(5h.
	25
The Remainder	3 --or 36

Moon Souths 36 Min. past 5 in the Afternoon.

E X A M P L E 4.

Moon's Age	17
Subtract	15
	<hr style="width: 50px; margin: 0 auto;"/>
Remains	2
Multiplied by	4
	<hr style="width: 50px; margin: 0 auto;"/>
Divide by	5)8(1h.
	<hr style="width: 50px; margin: 0 auto;"/>
	5
	<hr style="width: 50px; margin: 0 auto;"/>
	3 -- or 36'

Moon Souths 36 Min. past 1 in the Morning.

The Moon comes to the South the 7th Day of her Age, 36 Minutes past 5 in the Afternoon. In the Moon's Decrease, or when she is past 15 Days old, you must subtract 15, and proceed with the Remainder as in this Last Example: Now to find when it will be high Water at *London-Bridge*, add 3 Hours to the time of the Moon's Southing, and you have the time desired.

For the Day of New Moon, add the Epact and the Month propos'd together; subtract the Sum from 30, the Remainder is the Day of New Moon: When the Epact and Month thus added together, Exceed 30, then subtract it from 59; the Remainder is the Day requir'd.

Example	1734
	<hr style="width: 50px; margin: 0 auto;"/>
Month	3
Epact	6
	<hr style="width: 50px; margin: 0 auto;"/>
	9
Subtract from	30
	<hr style="width: 50px; margin: 0 auto;"/>
New Moon	21

Example 2,	1744
	<hr style="width: 50px; margin: 0 auto;"/>
Epact	26
Month	6
	<hr style="width: 50px; margin: 0 auto;"/>
	32
Subtract from	59
	<hr style="width: 50px; margin: 0 auto;"/>
New Moon	27

For the Day of Full Moon, add the Epact and Month together; subtract the Sum from 15; but when Subtraction cannot be made, borrow 30, which make 45, and the Remainder gives you the Day of Full Moon.

Example 1734

Epact	6
Month	4
	10
Subt. from	15
	5

Full Moon 5

Example 2, 1744

Epact	26
Month	6
	32
Subt. from	45
	13

Full Moon 13

The Period of Eclipses (according to the Learned Dr. *Haley*) is 18 Years; 10 Days, 7 h. 43 min. in Leap-Year 11 Days, 7 h. 43 min. For Example, in 1744 the Moon is 8 Digits Eclipsed April 15, 32 Minutes past 8 in the Afternoon; I wou'd know when this Eclipse returns?

Example. Sun is Eclips'd

D. h. l

1744. Apr.	15	8	32	a.
18	11	7	43	a.
1762. Apr.	27	4	15	m.

Example 2. Sun is Eclips'd

D. h. l

1746. Mar.	11	2	54	m.
18	10	7	43	m.
1764. Mar.	21	10	37	m.

This is the best general Rule that can be given to continue Eclipses from one Year to another; and may serve well enough for common use to examine Eclipses by; but not to trust to for the exact Quantity, and the precise Time.

To find the Roman Indiction.

**A**DD 3 to the Year of our Lord ; divide the Sum by 15, the Remainder is the *Number of Indiction*; and the Quotient shews how many Years since Tribute was paid to the *Romans*: For once in 15 Years, all those Nations that were under their Monarchy, paid them Tribute.

Example. Add 3 to this present Year 1734, which makes 1737, divided by 15, gives in the Quotient 115, Multiplied by 15, gives 1725, Years since Tribute was first paid ; the Remainder is 12, Years since Tribute was last paid. See the Work.

15)1737(115

15

23

15

87

75

Rem. 12

the Limit thus

The Table, Pages 21, and 22, shew the Number of Direction in both Accounts forever.

To find *Easter*, Subtract the Epact of the Year propos'd, if it be under 28) from 47 ; but if the Epact be 28, or 29, subtract it from 77. the Remainder is *Easter Limit* ; which if it be less than 32, it is in *March*, if it be above 31, in *April*: The next *Sunday* after the Limit thus found, is *Easter-day*.

Example. The Epact for 1734. is 6, subtracted from 47, there remains 41 ; subtract from 41, 31, the Number of Days in *March*, there remains 10. Now look in the Table, Pag. 4, and 5, and you'll find the next *Sunday* after the 10th of *April* to fall on the 14th of the same Month.

Example 2. The Epact for 1736. is 28, Subtracted from 77, there remains 49 ; from which take 31, there remains 18, *Easter Limit* in *April* ; which Day falls on *Sunday*, and next *Sunday* after is *Easter-Day*, *April 25*. The Year 1741, the Epact is 23, the Limit 24, *Easter Day March 26*, &c.

Of



## Of Years, Months and Days ; first, of Years.

**T**HE Natural Solar Year, is that space of time the Sun takes to go thro' the 12 Signs of the Zodiac ; that is, from one Point of the Ecliptick till it return to the same again, and contains 365 Days, 5 Hours, 49 Minutes, 26 Seconds.

A syderial Year is the time the Sun takes in going from any fix'd Star, till He overtake the same Star again, containing 365 Days 6 h. 9 min.

The Lunar Year consists of 12 Lunations, or Synodical Months ; and is less than the Solar Year by 11 Days ; which 11 is call'd the *Epact*, made use of to find the Moon's Age, &c.

The Civil Year is that which is in common use among Nations, and varies according to their different Accounts of time.

The *Julian* Year consists of 365 Days, 6 Hours ; but the 6 Hours are omitted for 3 Years successively, and are taken in the 4th Year, then making up 24 Hours, or a natural Day, which is added to *February*, then 29 Days.

*Note*, The common Year contains 52 Weeks and one Day ; but if a Year contain'd only 52 Weeks, the Day of the Month wou'd always fall on the same Day of the Week ; but the odd Day causes the Day of the Month to fall one Day later every Year in the Order of the Week-Days.

In *Bissextile* or Leap-Year two Days later, the *Julian* Year is 10 Minutes, 34 Seconds more than the true natural Year.

This Account of time was settled by *Julius Caesar* 44 Years before the Birth of our Saviour ; and is still in use in the *British* Dominions, by the *Moscovites*, *Syrians*, *Abissines*, *Æthiophians*, &c. (the Names of their Months

Months differ.) The Vulgar Year in *Great Britain* begins on the 1st *January*, the Ecclesiastical Year on *March 25*; on which Day the Joyful Message was brought to the blessed Virgin.

The Astronomical Year begins at the Vernal Ingress, (now the 9th of *March*.)

The *Gregorian* Year contains 365 Days, 5 Hours, 49 Minutes, 2 Seconds; which is less by 24 Seconds than the true Solar Year.

The *Gregorians* have their common Years and Leap-Years the same with the *Julians*, except it be at the End of a Century, or 100 Years.

For Example; the Years 1700, 1800, 1900, (all Leap-Years in the *Julian* Account;) but the *Gregorians* omitting the 29th of *February* get before us in reckoning of the Month in that Space of Time 3 Days: But in the Year 2000, they take in the Leap-Day, and by that means the difference between the two Accounts (13) is the same as in the Year 1900. See the Table, Page 8.

The *Gregorian* Year begins the first of *January* equal to the 21st of the *Julian* December.

This Account is received by all the Countries that profess Subjection to the See of *Rome*.

The *Arabians*, *Indians* and *Turks* account by the Moon.

The *Jews*, or *Hebrews* (in remembrance of their departure out of *Ægypt*) begin their Ecclesiastical Year the 14th of the first Month; and the first New Moon after the Vernal Equinox begins the 1st Month call'd *Nisan*, which takes in part of our *March* and *April*.

*Tisri*, or the 7th Month, begin their Civil Year; the 1st New Moon after Autumn Equinox begins this Month; it takes in part of our *September* and *October*.

Of the Four Quarters of the Year.

I Of the Spring-Quarter.

**T**HE Spring, or Vernal Quarter begins the 9th of *March*, when the Sun enters *Aries*, or the *Ram*; the Sun is then said to be in the Equinoctial Line, making Day and Night of Equal Length to all parts of the World. But this must be thus understood; that the Sun then appears equally in both the Northern and Southern Hemispheres. For there are two Places on the Earth where the half of the Sun only is seen on these Equinoctial Days.

*First* then, these Places may be said to have equal Day and Night at the same time; because the half of that great Light which rules the Day is above their Horizon, and the other half under.

*Secondly*, They may be said to have neither Day nor Night; because they have not the Sun wholly above their Horizon, nor altogether deprest under.

*Thirdly*, They may be said to have no Night at all, because they have no Darknes. See Page 40.

This Quarter continues while the Sun is travelling thro' *Aries*, *Taurus* and *Gemini*.

2. The Summer-Quarter begins about the 10th of *June*, when the Sun enters *Cancer*, or the *Crab*, making the longest Day in the Northern Hemisphere, and continues while the Sun is running thro' *Cancer*, *Leo* and *Virgo*.

3. The Autumn, or Harvest-Quarter begins the 12th of *September* when the Sun enters *Libra*, or the Scales; when Day and Night are equal all the World over, except under the Poles. This Quarter

continues while the Sun is Marching thro' *Libra*, *Scorpio* and *Sagittary*.

The Winter-Quarter begins the 10th of *December*, when the Sun enters *Capricorn*, or the *Goat*, which is the shortest Day with all the Inhabitants on the North side of the Equator. This Quarter continues all the time the Sun is passing thro' *Capricorn*, *Aquarius* and *Pisces*.

These Signs are only certain Constellations, or Companies of fixt Stars, lying in the Sun's yearly Path; and are imagin'd to represent the Form of those Animals by whose Names they are call'd.

### *Of the Twelve Months of the Year.*

**T**HE Months are variously reckon'd, as well as the Year, and are either *Astronomical* or *Political*.

#### *I Of the Astronomical Month.*

**T**HE Solar Month, is that space of time the Sun takes in passing thro' one of the 12 Signs of the Zodiack; and is, (according to his middle Motion) 30 Days, 10 Hours, 29 Minutes, 6 Seconds: But this Month varies according to the true, or apparent motion of the Sun.

The Lunar Months are three.

1. The Periodical Month, is the time in which the Moon performs her Journey thro' the 12 Signs; and is (according to her middle Motion) 27 Days, 7 Hours, 43 Minutes, 7 Seconds.

2. The Synodical Month, is the time between one Conjunction and another, with the Sun; which, (according to her mean Motion) she performs in 29 Days, 12 Hours, 44 Minutes.

3. The Month of Illumination, or Appearance, is 28 Days, or 4 Weeks, the longest time that the *Moon* can be seen between Change and Change.

The Political or Civil Months are such as are used by all Nations; they differ much as to their Names, and Number of Days. I shall only take Notice here of the Months that are in use in the old, and new Style; they being the same as to their Names and Number of Days; and the Antient *Hebrew*, or *Jewish* Months, for the better understanding of them, as they occur, (by Name or Number) in reading of the holy Scripture.

The First, or the Eleventh Month, 31 Days.

*January*, from *Janus*, the first Heathen King of the *Romans*, whom they Deify'd after his Death; and built a Temple in which they Worship'd him.

The Second, or Twelfth Month, 28, or 29 Days

*February*, from *Februa*, i. e. the expiatory Sacrifices offered up by the Antient *Romans*, for the Purifying of the People in this Month.

The Third, or First Month, 31 Days.

*March*, from *Mars*, call'd God of Battle, or War, by the Heathens feigned the Son of *Juno*, and Father of *Romulus*, the Founder of *Rome*.

The Fourth, or Second Month, 30 Days.

*April*, from *Aphroditus*, or *Venus*, feigned Goddess of Love.

The Fifth, or Third Month, 31 Days.

*May*, from *Maia*, a Heathen *Roman* Goddess; likewise call'd *Flora*. On the first Day was kept the Feast of *Cloris*, *Flora*, which was afterwards Solem-nized with Flowers and green Boughs, stiling that Strumpet, the Goddess of Flowers.

The Sixth, or Fourth Month, 30 Days.

*June*, from *Juno*, also a Heathen Goddess, feign'd to be Sister and Wife to *Jupiter*, and Mother of *Mars*.

The Seventh or Fifth Month, 31 Days.

*July*, so called in Honour of *Julius Cæsar*; the first Heathen Emperor of the Romans.

The Eighth, or Sixth Month, 31 Days.

*August* so call'd in Honour to *Augustus Cæsar*, the second Heathen Emperor of the Romans.

In his Days was born the King of Heaven and Earth.

Note, *September*, *October*, *November*, and *December*, still, retain their old *Latin* Names.

*Sept.* signifies the 7th, *Oct.* the 8th, *Nov.* the 9th, and *Dec.* the 10th, Month, reckoning from *March*.

The Ninth, or Seventh Month, 30 Days.

*September* for *Septem*.

The Tenth, or Eighth Month 31 Days.

*October* from *Octo*.

The Eleventh, or Ninth Month, 30 Days.

*November* from *Novem*.

The Twelfth, or Tenth Month, 31 Days.

*December* from *Decem*.

### The Hebrew, or Jewish Months.

1	<b>A</b> <i>Bib</i> or <i>Nisan</i>	30	<i>Esth.</i> 3, 7. <i>Exod.</i> 13, 4.
2	<i>Fiar</i> , or <i>Zif</i>	29	<i>1 Kings</i> 6, 1.
3	<i>Sivan</i>	30	<i>Esth.</i> 8, 9.
4	<i>Tamuz</i>	29	<i>2 Kings</i> 25, 3, &c.
5	<i>Ab</i>	30	<i>1 Chron.</i> 27, 5, 8, &c.
6	<i>Ebul</i>	29	<i>Neb.</i> 6, 15.
7	<i>Ethanim</i> or <i>Tisri</i>	30	<i>1 Kings</i> 8, 2.
8	<i>Marchesuan</i> , or <i>Bull</i>	29	<i>1 Kings</i> 6, 38.
9	<i>Chisleu</i>	30	<i>Neb.</i> 1, 1.
10	<i>Zebeth</i>	29	<i>Esther</i> 2, 16.
11	<i>Sebat</i>	30	<i>Zech.</i> 1, 7.
12	<i>Ader</i>	29	<i>Esth.</i> 9, 1.

A whole Lunation, or the Age of a Moon from Change to Change consists of about 29 Days and half. And therefore to avoid this Fraction, the *Hebrews* compos'd their Months alternately of 30, and 29 Days: And when the Difference between this way of reckoning by the Moon, and the true Solar Year (having regard thereunto) Amounted to such a Number of Days, then they added a Month more, which they call *Veader*; and this Month is plac'd before *Ader*, for *Ader* is always the Last Month of the Year.

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*Of the Various ways of Reckoning Day and Night.*

A Natural Day, is determined by the Sun's Motion (according to appearance) round the Earth in 24 Hours, tho' in reality, it is the Earth that turns round her own Axis from West to East, in that Space of Time: And this is the reason the celestial Bodies seem to us to move from East to West.

The natural Day is also called Civil, because diversly reckoned by divers Nations.

The *Britains* and *Romans* begin the Day at Midnight; the *Jews*, *Egyptians*, *Athenians*, &c. begin the Day at Sun-Setting, which appears to be the true original Beginning from Scripture, *Gen. 1, 5, 10.* the *Turks*, *Babylonians*, &c. begin the Day at Sun-Rising Astronomers begin the Day at Noon.

The Artificial Day is the time between Sun-Rising and Sun-Setting (opposite to which is Night) and differs in Length according to the Sun's Place in the Zodiaek and Latitude of the Region.

The Artificial Day, by Astronomers is divided, be it long or short, into 12 Planetary Hours: The Length of a Planetary Hour at *London*, when the Day is at the longest it is about 82 min. at the shortest scarce

48 min. This Reckoning is supposed to be in use at Jerusalem. See *John* 11--9. also *Mat.* 10.

*The Seven Days of the Week observed as Sabbaths, by*

1. **C**hristians, in Commemoration of Christ's Resurrection.
2. Grecians, in Remembrance of the second Day's Works of the Creation.
3. Persians, in Commemoration of the third's Day's Works.
4. Assyrians, in Remembrance of the fourth's Day's Works.
5. Egyptians, in Commemoration of the fifth Day's Works.
6. Turks, in Remembrance of the Creation of Man.
7. Jews, in Commemoration of God's Resting from all his Works.

*Of the Names of the seven Days of the Week.*

	<i>The Christian Names of the Week Days.</i>	<i>The Jewish Names of the Week Days.</i>
Of the Week,	First, or the Lord's Day	First Day of the Week
	The Second Day	The Second Day
	The Third Day	The Third Day
	The Fourth Day	The Fourth Day
	The Fifth Day	The Fifth Day
	The Sixth Day	The Sixth Day
	The Seventh Day	The Jewish Sabbath



The Names of the seven Days of the Week continu'd.

	The Heathen Roman's Names of the Days of the Week	The Heathen Saxons Names of the Week Days.	
1	Solis	Sun's-Day	1.
2	Lunæ	Moon's-Day	2.
3	Martis	Tuefco't-Day	3.
4	Mercurii	Woden's-Day	4.
5	Jovis	Thors-Day	5.
6	Veneris	Friga's-Day	6.
7	Saturni	Seater's-Day	7.

Christians might thus distinguish the Days of the Week, and not use these Heathen Names. See *Genesis* 1. The Heathen Romans dedicated the seven Days of the Week, to the seven Planets, (their Gods and Goddeffes) and accordingly called them by their Names, as in the the Table above.

The Saxons likewise call'd the Week-Days after the Names of their Idols ; which Idols also represented the Planets.

The Jewish Artificial Day divided into.

Planetary	} Hours	1	2	3	4	5	6	7	8	9	10	11	12
and great			1			3			6			9	
Equal to our		7	8	9	10	11	12	1	2	3	4	5	6

Each of these Quarters, or large Hours contain three of the Planetary or small Hours, as appears plainly from this Table.

The first Quarter of the Day takes in the first, second and third Hours from Sun-Rising : But to avoid the trouble that attends the Planetary Hour, the Jews now-

nowadays begin the Natural Day at six a clock in the Evening, and the Artificial at six in the Morning. And therefore, their first Hour (beginning at six) is equal to our seventh.

The second Quarter of the Day, which they call the Third Hour, contains 4, 5, 6, equal to 10, 11, 12, &c.

They divide the Night also into great Hours, or Watches; each Watch consisting of 3 ordinary Hours. The first Watch contains, 1, 2, 3, or the three first Hours of the Night: The second Watch contains the 4th, 5th and 6th, &c.

Now this double reckoning of Hours occasions a seeming contradiction in some Passages of the Holy Scripture: St. *Mark* 15, 25. says, that our Lord was Crucified the third Hour; St. *John* 19, 14, says, that Jesus stood before *Pilate* the sixth Hour: Now, these two Passages may be thus reconcil'd that the End of the third great Hour (of which St. *Mark* speaks) is equal to the end of the sixth small Hour, mention'd by St. *John*. And this is farther proved from Verse 33, where St. *Mark* agrees with the other Evangelists concerning the time that the Darknes began and ended: It began when our Lord condescended to be Nailed to the Cross, at the sixth Hour, equal to our 12th, and ended at Nine, or at Three in the Afternoon.

That this Eclipse of the Sun was supernatural, and not caused by the Interposition of the Moon between him and the Earth, is proved from the Position of the Lummaries at that time.

It is agreed that Christ suffer'd the 33d Year of his Age; and consequently on the 3d of *April, Friday*, or the Day before the Feast of the Passover; on which very Day the Moon was at Full, which made *Dionysius the Areopagite* break out into this Exclamation; *Either the God of Nature suffers, or the Machine of the World dissolves*; not knowing how Prophetical he spoke; but afterwards he was converted by Saint *Paul's* Preaching

Preaching, and was then persuaded that it was the God of Nature that did really suffer at that time. Christ having taken upon him the Punishment that was due to us for our breach of the Divine Commands, God the Father, therefore withdrew the Light of his Countenance from him, (for a time) and also the Light of the Sun! We deserved to suffer in Eternal darkness; But our gracious Redeemer, to rescue us from the Divine Justice, takes our place, and suffer'd in darkness for us.

Let us not therefore slight this matchless Instance of our Saviour's Love, and *neglect so great Salvation!* But let us be faithful unto the end, to him that thus loved us, and washed us from our Sins in his own Blood.

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*A Brief Description of all kind of Meteors.*

First, of **CLOUDS.**

**CLOUDS**, are a *Congeries*, or Heap, (chiefly) of Watery Particles drawn, or sent out of the Earth and Seas in Vapours; and suspended (being light of Body) in the second Region of the Air, till they are again dissolved, either by Heat, or broken by the violent Agitation of Winds, or driven against the sides of Hills and Mountains, &c.

Clouds and Vapours are the Parents of Rain, Hail and Snow; and Rain, and Water (to which Hail and Snow turn) are the Parents of Clouds and Vapours; therefore, since they beget each other, and are of the same Element and Substance, very little need be said of them separately; only, a Word or two touching the several shapes and dresses in which they appear to us.

RAIN, is nothing but a Cloud dissolved either by Heat, or broken by Winds, as above said.

Here it may be observed the great distance of the Cloud from the Earth, the small Heat that dissolves it, causes small Drops; but if it be dissolved by great Heat, or else be at small distance from the Earth, then are the Drops of Rain the greater, and more Vehement.

SNOW, is a Cloud, first Dissolved into Drops, and in its Descent to the Earth meeting with a soft freezing Wind, or at least passing thro' a colder Region of the Air, each Drop is immediately frozen into an Icicle, shooting it self forth into several Points; and in their continual Motion and wavering to and fro, touching upon each other; or meeting (with) some sprinkling and intermixing Gales of Warmer Air, &c. some are a little thaw'd, blunted, frothed, chumper'd; others broken; but the most hanked and clung in several Parcels together, we call Flakes of Snow, &c.

The true Cause of the Congelation of Water into Ice, seems plainly to be the Introduction of the Frigorifick Particles into the Pores or Interstices between the Particles of the Water; and by that means, getting so near to them, as to be just within the Sphere of one another's Attracting Force, and then they must cohere into one solid or firm Body. But Heat afterwards separating them, and putting them into various Motions, break this Union, and place the Particles so far from one another, as to be out of the distance of Attraction, and brought into the Verge of Repelling Force, and then the Water re-assumes its fluid Form.

HAIL cometh of Rain congelated into Ice, (or as Dr. *Falk* observes) it is a hot Vapour in the middle Region of the Air, and by the Coldness thereof is  
con-

condensed into a Cloud ; which falling down, is by the sudden cold of the Lowest Region congealed into Hail.

The most usual times of the Year for Hail are *April* and *October* ; because then there wants neither hot Vapours to resist the cold, nor sufficient Cold to harden the Drops of Rain from whence it proceeds ; whereas in Winter there wants hot Vapours, and in Summer 'tis too hot to congeal the Drops of Rain as they fall down.

**D E W** is composed of Streams of the Terrestrial Globe, which for a while swim to and fro in the Air, but at last convene into Drops, and then fall down again to the Earth.

**H E A T**, one of the Four primary Qualities of Bodies, and (according to the new Philosophy) chiefly consists in the Rapidity of Motion, in the smaller Parts of Bodies, and that every way : Or in the Parts being rapidly agitated all ways. It's Operation upon the Senses we call Heat, and is Estimated according to its Relation to the Organs of Feeling ; for we do not esteem any Body to be hot, unless the Motion of its small Parts be violent, or brisk enough to encrease, or surpass that of the Particles, of the Organ : For if it be more weak or Languid in the Object than in the Sentient, we say, the Body is cold, &c.

**C O L D**, also one of the Four Primirary Qualities of Bodies ; and is such a state of the minute Parts of any Body, in which they are more slowly or faintly agitated, than those of the Organs of Feeling ; so that it is only a Relative Term, the same Body being liable to be pronounced hot or cold, as its Particles are in a greater or lesser Motion than those of the Sensitory Organs. Little need be said of *Cold*, for every Body has it ready enough at their Fingers ends.

The RAIN-BOW, or *Iris*, is the Sun's Image, reflected from the concave Surface of an Innumerable Quantity of small spherical Drops of falling Rain, &c.

Authors differ concerning the Original of this surprising *Bow*.

Naturalists affirm that the *Rainbow* appear'd before the Flood, (as being produced by a natural Cause) as well as since. But they ought to consider, that the great Creator of all things, Visible and Invisible, who sits at the Helm of the Universe, may cause Nature to produce Signs and Wonders, when, and how He pleases, without any Necessity of a new Creation. And that the *Rainbow* was seen before the Flood, (as now) is very improvable; That a God of an Infinite and Boundless Power, should give as a Token or Sign of Consolation, to *Noah*, after his Melancholy Voyage, a Meteor that was commonly seen before:

But when we look upon it as then exhibited, and Established by Almighty Power, as a perpetual sign of God's Covenant with *Noah* and his Posterity, that the World should be no more drowned; I say, we may then look upon it as a grand, and Beautiful Token, worthy of a God to give, to Engage the Admiration and Love of his People, and their Faith to rely upon his Promises. *Gen. 9, 11, to 18.*

### Of THUNDER and LIGHTENING.

The *Phænomena* of this very common, but often times dreadful Meteor, are thus accounted for and solved by *Dr. Hook*. The Atmosphere about the Earth abounds with Nitrous Particles of a spirituous Nature, which are every where carried along with it; besides which sort of Particles, there are also others raised up into the Air, which may be somewhat of the Nature of sulphureous, unctuous, or other combustible Bodies: So that it is an Exhalation hot and dry, which  
being

being drawn up into the middle Region of the Air, and inclosed in the Body of a thick cold Cloud, (so that the Hotness of the Exhalation cannot agree with the Coldness of the Place) it suddenly breaketh out, and renteth the Cloud assunder. This Violent Eruption makes a great Noise, which we call *Thunder*. The Cloud being thus broken and dissolved by the Heat of the Exhalation, it falls downward; then follows (most commonly) a Shower of Rain. Hence at the Rent of the Cloud there always issues forth a Flash of Fire, which we call *Lightening*; and that always precedes the Thunder-Clap; because our Sight is much quicker than our Hearing: For Light comes to us from the Sun in 7 minutes of time; whereas Sound (according to Sir *Isaac Newton's* Law of the Motion of Sound) moves but 77 Miles in 7 Minutes.

A Thunder-bolt is a most rapid Flame which darts out of the Cloud (when the Exhalation is set on Fire) to the Ground, and strikes thro' every thing in its way.

*Earthquakes* are often occasioned (as Mr. *Boyle* thinks) by the sudden Fall of pondrous Masses in the Hollow Parts of the Earth, whereby those terrible Shocks and Shakings are produced: And sometimes by the Violent Eruption of the Windy Exhalation out of the Earth, it casteth up the Earth into the Air; and at other times it causes it to sink a great depth, swallowing up whole Cities! leaving (sometimes) Pasturage in the place of Tillage, and Tillage in the room of Pasturage.

## I.

But God, who governs Nature's Laws,  
Is still the fundamental Cause.  
When we neglect, and slight his Love,  
We hear his Threatning Voice above.

His founding Chariot shakes the Skies,  
 And th' Earth beneath him trembling lies !  
 He rends the Clouds, he tears the Air,  
 His Thund'ring Voice strikes Awe and Fear.

## II.

Now, Fire and Lightning flies abroad,  
 The threatenng Judgments of our God !  
 The Earth's Foundations reel, and shake,  
 The staggering Hills thus frightened, quake !  
 And yet the hard'ned Sinner stands,  
 And still abuse the Lord's Commands !  
 He fears not him that shakes the Hills,  
 Nor yet his Pow'r who saves and kills.

## III.

Till last in one Eternal Storm,  
 The God of Thunder smite the Worm !  
 And then in Flames he must confess,  
 God's Justice and his Right'ousness ;  
 If Love and Threatning will not do,  
 God's Vengeance then must needs ensue.

AIR, one of the Four Elements, wherein we breathe, and in which the Earth is ballanced by the Great Architect of the Universe.

Without Air, no Creature can live one Minute : For the Breath we draw, is Air. The Blood cannot circulate in our Veins without it. It gives Motion and Pregnancy to the other Elements. Fire would soon extinguish, Water would putrify, and the fruitful Pores of the Earth would quickly close up without Air.



WIND is defined to be a Stream, or Current of the Air; and Constant, Variable, Cold or Hot, according to the Latitude and Situation of the Region, Nature of the Soil, and Seasons of the Year, &c.

*AURORA BOREALIS*, or the Northern Lights, vulgarly called *Streamers*, or *Merry Dancers*; because they mix and shuffle, like a Set of Country-Dancers, or like the Streamers of a great Fleet on the Main in a windy Day.

Strange are the Conjectures of the Unlearned concerning this Appearance in the Heavens: Some imagine, they see Armies of Men, Horses and Chariots fighting in the Air! which they take to be sure Prefages of War, &c.

But the real Cause is Natural, and proceeds from the Sun's having rarefy'd the lower Region of the Air in the Day-time, doth in the Night (a little after Sun-set) raise those light Particles of Matter into the more Ætherial Region, and causes them to be seen there as so many Streams, or Pyramidal Glades of Light, darting themselves (generally) towards the opposite Parts of the Heaven, where the Sun is at that time.

*IGNIS FATUUS*, or *Foolish Fire*, so called, because it makes People oftentimes wander out of their Way, who take it for a real and substantial Fire; but when they find they are deceived, they are apt to call it a Foolish Fire, or themselves Fools for following it. It is also called *Will with a Wisp*, or *Jack with a Lanthorn*, appearing chiefly in Summer-Nights, haunting, most commonly, Church-Yards, Meadows and Boggs. It consists of a viscous Substance, or fat Exhalation, which, being kindled in the Air, reflects a kind of thin Flame, yet without any sensible Heat.

*Shooting*

*Shooting Stars* are improperly called *Stars*, because they are but small Exhalations in the Air : That Substance (which we see on the Ground in the Morning) is like Jelly.

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*Natural Prognosticks of the Weather.*

Scripture-Observations of the Weather.

**S**OUTH Wind, or Heat (in Summer) foreshews Whirlwind, *Job* 37, 9. Cold, or Fair Weather, is foreshewn by the North Wind, *Job* 37. 9, 22. for that driveth away Rain. A red Sky in the Evening foreshews fair Weather ; in the Morning, foul, *Matt.* 16, 2. A Cloud rising out of the West, foreshews Rain, *Luke* 12. 54. South Wind foreshews Heat, *Verse* 54.

This was on the Main Continent.

*Signs of Fair Weather.*

1. The Sun rising bright and clear.
2. If he drive the Clouds before him into the West.
3. If at his Rising, a Circle appears about him, and by degrees vanishes away.
4. If the Sun sets red.
5. If the Moon be clear three Days after the Change, or three Days before the Full.
6. Clouds appearing with Edges, yellow.
7. A Cloudy Sky, clearing against the Wind.
8. The Rainbow, after Rain appearing meanly red.
9. Mists coming down from the Hills, and settling in the Valleys ; or Mists in the Evening, shew a hot Day on the Morrow ; likewise white Mists rising from Waters in the Evening.

10. Crows

10. Crows and Ravens gaping against the Sun.
11. Beetles flying in the Evening.
12. Bats flying about sooner than ordinarily they do.
13. Many Flies or Gnats playing in the Sunshine at Evening.
14. The Wincopipe, a small red Flower, which, if it be open in the Morning, you may be sure of a fair Day to follow.

*Signs of Rain.*

1. If the Sun be fiery red at his Rising.
2. If he shew pale and wan.
3. If red and black Clouds be about him at his Rising, in which he is soon after hid.
4. If his Rays look dark or blue.
5. If a Cloud appear, to which, Vapours are seen to ascend.
6. When the Moon Changes near the *Pleades*.
7. A Circle called *Halo*, about the Moon.
8. If the Sun seems greater in the East than commonly it doth.
9. If a black Cloud appears in the West at Sunset, it will rain that Night, or the Day after.
10. If the Sun or Moon look pale, expect Rain; if fair and bright, fair Weather.
11. If the great Stars be only seen, and look dim.
12. The Rainbow appearing very green the more Rain.
13. Birds washing themselves.
14. The chattering of the Mag-pye.
15. Peacocks and Ducks often crying.
16. Swallows flying low.
17. The Owl crying *Chiwit* often
18. The Working of the Spinner.
19. Water-Fowls (as Sea-Gulls, More-hens, &c.) flock together, and fly from the Sea; and contrariwise, when Land-Birds fly to the Waters (such as Crows, Swal-

Swallows, &c.) and beat the Water with their Wings.

20. Many Worms appearing above the Earth.
21. The wallowing of Dogs.
22. Beasts eating greedily, and licking their Hoofs.
23. The biting of Fleas, Gnats, &c
24. Soot falling much from Chimneys.
25. The sweating of Stones, VVainicot, and other solid Bodies.
26. A Circle round a Candle.
27. Hurts, Aches Corns, and the Limbs of antient People do also foreshew the approach of Rain or Frost: for then they grieve them more than usual.
28. No Dew Morning nor Evening.
29. Bells heard farther than usual.
30. Barn-door Fowls and Gipsies picking themselves, as if they were lousy, or had the Itch, is a sure Sign of Rain.

*Signs of Wind.*

1. Red Clouds appearing in the Morning.
2. Much shooting of the Stars.
3. Rainbow red.
4. Black Circles, with Streaks about the Sun and Moon.
5. Stars dim and fiery.
6. Autumn fair, a windy Winter.
7. Clouds flying swift in the Air.
8. Fire burning pale, or huzzing.
9. Ravens clapping their Wings.
10. The high flying of the Raven.
11. Crying of Swine.
12. The Resounding of the Sea upon the Shore; and Murmuring of Winds in Woods and Caves, (without apparent Wind) shew Wind to follow: For such Winds breathing chiefly out of the Earth, are not presently perceived, except they be pent by Wood or Water, &c.

Remarkable Passages of Time since the Creation, to the present Year 1734, according to the Julian Account.

Note, That the first column signifies the Year of the World ; the second, the Year before Christ.

THE Creation of the World,	0000	3947
The World drowned Gen. 7, 6.	1656	2291
The Building of <i>Babel</i> ( <i>Nimrod</i> the Ringleader, King of <i>Assyria</i> supposed to be the first King on Earth) } Gen. 11, v. 45.	1787	2160
Heathen Gods began,	2006	1941
<i>Gomorrhah</i> destroy'd Gen. 17, 10,	2047	1900
<i>Abraham</i> offers <i>Isaac</i> , Gen. 22	2064	1883
<i>Israelites</i> depart out of <i>Ægypt</i> , Exod. 12.	2453	1494
The Kingdom of <i>Troy</i> began by <i>Dardanus</i> ,	2471	1476
The Destruction of <i>Troy</i> ,	2767	1180
<i>London</i> Built,	2843	1104
<i>Saul</i> , the 1st King of <i>Israel</i> anointed,	2879	1068
The Temple of <i>Jerusalem</i> finish'd.	2939	1008
<i>York</i> built,	2961	986
<i>Rome</i> built by <i>Romulus</i> ,	3197	750
The Monarchy of <i>Assyria</i> ends,	3110	837
The Monarchy of <i>Persia</i> began by <i>Cyrus</i> ,	3387	560
The <i>Persian</i> Monarchy ends, } And the <i>Grecian</i> Monarchy begins, }	3615	332
The old Testament translated into Greek by the 70 Interpreters,	3722	225
The Romans conquer'd <i>England</i> ,	3902	45
<i>Julius Cæsar</i> corrected the Kalender,	3903	44
The King of Kings began his Endless Reign,	3947	

## Remarkable Passages of Time continued.

Note, The first Column shews the Year of Christ; the second Column, Years since.

Since the Union of God and Man!	0	1733
The Blessed Virgin died,	45	1688
The Britons embraced the Christian Religion,	83	1650
Constantine the Great assembled a Council of 318 Bishops at Nice, which condemned Arius,	325	1408
The coming of the Saxons into Britain,	447	1286
Singing of Psalms brought into the Church by Damasus,	383	1350
England divided into Seven Kingdoms,	527	1206
Bells first ordained to assemble People together,	603	1130
The coming of Mahomet the Turk,	622	1111
Lent, first set up in England,	640	1093
Organs brought into the Church,	657	1076
The Danes invaded England,	873	860
A Terrible Earthquake in Britain,	1048	685
Transubstantiation brought into the Church by the Council of Lateran	1059	674
The first Parliament of Nobility, Clergy and Commons,	1116	617
Ireland reduced to England by Henry 2.	1177	556
Henry Fitz Alwin, First Mayor of London	1190	543
A great Dearth for Three or Four Years together, Wheat then sold for a Mark the Quarter, which before was but 12 Pence,	1204	529
London Bridge finished with Stone,	1209	524

Another

Another great Dearth ; that many eat		
Dogs and Horses,	1315	418
Guns invented,	1378	355
<i>Martin Luther</i> , that great Reformer,		
born,	1483	250
Printing first in <i>Britain</i> by <i>Will. Caxton</i> ,	1471	262
<i>America</i> First discover'd, by <i>Chr. Colum-</i>		
<i>bus</i> ,	1492	241
The Psalms turned into Meter by <i>Stern-</i>		
<i>hold</i> ,	1552	181
The Terrible Massacre in <i>France</i> ,	1572	161
A general Earthquake,	1580	153
The Powder Plot,	1605	128
The Bible new translated,	1611	122
The Terrible Massacre in <i>Ireland</i> ,	1642	91
<i>Edge-Hill</i> Fight,	1642	91
<i>Newbury</i> -Fight,	1644	89
Quakerism began, by <i>George Fox</i> ,		83
The Blazing Comet seen <i>December</i> ,	1680	53
A great Plague in <i>London</i> , whereof died		
100000.	1665	68
A dreadful Fire, which burnt 87 Parishes		
in <i>London</i> ,	1666	67
A Frost for 13 Weeks,	1684	49
The Battle of the <i>Boyne</i> ,	1690	43
The high Wind in <i>November</i> ,	1703	30
<i>Blenheim</i> -Fight,	1704	39
The Union of <i>Scotland</i> and <i>England</i> ,	1707	26

*A General View of the Four Parts of the World; and  
first, of EUROPE.*

**E**urope is seated between 34 and 72 Degrees of North Latitude, from the North Cape to Cape *Metapan* in the *Moran*, equal to 2641 Miles; and from Cape *St. Vincent* in the West, to the Mouth of the River *Oby* in the East. It contains 82° of Longitude, which are 5699 *English* Miles.

*The principal Division of  
the Continent of Europe.*

Germany.  
Moscovia or Russia.  
Scandinavia comprehends  
Swedeland. }  
Norway. }  
Denmark.  
France.  
Italy.  
Spain.  
Poland.  
Prussia.  
Turkey in Europe.  
Netherlands.  
Greece.  
Transilvania.  
Hungary.

*The most noted Islands on  
the Coasts of Europe.*

Great Britain.  
Ireland.  
Isle of Man.  
Sicily.  
Guernsey, Jersey,  
Sardinia.  
Majorca, Minorca.  
Azores.  
Langeland.  
Laland.  
Iceland.  
Gothland-Isle.  
Cephalogna.  
Candia.  
Negropont, and Green-  
land depending on Norway.



## Of ASI A.

**A** *SI A*, is situated on the East of *Europe*; It contains  $130^{\circ}$  of Longitude, equal to 9035 *English* Miles. In its Latitude it possesses all the Temperate, the greatest part of the Torrid, and part of the Frigid Zones; so that it enjoys the whole 24 Climates; and its longest Days are from 12 to 24, Miles 7645.

*The Continent of Asia.*

Asia Minor.  
 Syria.  
 Palestine.  
 Arabia.  
 Assyria.  
 Chaldea.  
 Mesopotamia.  
 Turcomania or Armenia major.  
 Georgia.  
 Mengrelia.  
 Persia.  
 Magulistan or Indostan.  
 Turkey in Asia.  
 East Indies.  
 China.  
 Tartary.  
 Paradise.  
 Judea, &c.

*The principal Island on the Coast of Asia.*

Cyprus.  
 Rhodes  
 Lesboes or Meteline.  
 Chios or Scio.  
 Samos.  
 Coos or Lango.  
 Ceylon.  
*The Maldivé Islands.*  
*The Sunda Islands.*  
 Sumatra, Java.  
 Borneo.  
*The spice Islands.*  
 Molucca-Islands.  
 Banda, Ternate.  
 Amboyna, Ceram.  
 Gilolo.  
*The Philippine-Islands.*  
 Japonese-Island.  
*The Ladrones Islands.*

## Of AFRICA.

**A**frica lies South of *Europe*, West of *Asia*, extending in Longitude 75 Degrees from East to West, 5212 Miles. Its Latitude is from 36 Degrees North, to 35 South, in all 71, Miles 4934.

### *The Continent of Africa.*

Barbary.  
 Egypt.  
 Bilidulgerid.  
 Saara.  
 Negro-land.  
 Guinea.  
 Nubia.  
 Abissynia.  
 Zanguebar.  
 Congo.  
 Monotapa.  
*The Land of the Cafres.*  
 Ethiopia.  
 Morocco.  
 Tripoli.  
 Zanfara.  
 Tefset.  
 Zanhaga.  
 Zaara, or the Desart.

### *Islands round the Coast of Africa.*

Madera.  
 Canaries.  
 Cabo Verde.  
 St. Thomas.  
 St. Helena.  
 Madagafcar.  
 Zocolora.  
 Fernand-po.  
 Princess Island  
 St. Mathew.  
 Malta.  
*The Island of Ascension.*  
 Teneriff is one of the  
*Canary-Isles* and the Peak  
 of it is by some reckoned the  
 highest Land in the World,  
 the Ascent of it is 15 Miles,  
 and the Perpendicular sup-  
 posed to be 5 Miles.

## Of AMERICA.

**T**His Part of the World was discover'd in the Year 1492 by *Christopher Columbus*, a *Genoese*, Imploy'd by *Ferdinand*, King of *Spain*. The Extent of what has been discovered of this Tract of Land, is from 55 Degrees of South Lat. to 80 Degrees of North Lat. equal to 9382 *English* Miles; and in Longitude 99 Degrees, which gives 6380 *English* Miles. The *Isthmus* parting South and North *America*, is 139 Miles over.

*Continent.*

Esquimaux.  
Canada.  
Berfiamites.  
Sagenay.  
Louifiana.  
Iroquois.  
Etechemins.  
Acadia.

*Subject to France.*

New England.  
New York.  
New E. Jerfey.  
New W. Jerfey.  
Penfylvania.  
Maryland.  
Virginia.  
Carolina, Georgia.

*Subject to Britain.*

Florida.  
Groenland.  
New Britain.  
New Wales.

*Not all conquer'd.*

Mexico.  
Guatimala.  
Terra firma or Main Land.

*Continent.*

Peru, &c.  
Paragua or Rio de la Plata.  
*Spanish Dominions.*  
Brasil belonging to Portugal.  
Caribana not conquer'd.

## ISLANDS.

Newfoundland.  
California.  
Cuba.  
Jamaica.  
Hispaniola.  
Caribees.  
Sotovento.  
Bermudas or Summer-Isles.  
Puerto rico.  
Barbadoes.  
Lucayo Islands.

There are besides these principal Islands about 100 of less Note.

A Table shewing the Length of the longest Artificial Day from One Degree of Latitude to Ninety.

Lat Deg	Hour	Min.	Lat Deg	Hour	Min.	Lat Deg	Hour	Min.
1	12	3	31	14	1	61	18	53
2	12	6	32	14	6	62	19	19
3	12	10	33	14	11	63	19	49
4	12	14	34	14	16	64	20	24
5	12	17	35	14	22	65	21	10
6	12	20	36	14	27	66	22	20
7	12	24	37	14	33	67	24	1
8	12	28	38	14	38	68	42	1
9	12	32	39	14	44	69	54	16
10	12	35	40	14	51	70	64	13
11	12	39	41	14	58	71	74	0
12	12	43	42	15	4	72	82	6
13	12	46	43	15	11	73	89	4
14	12	50	44	15	18	74	96	17
15	12	53	45	15	26	75	104	1
16	12	57	46	15	34	76	110	7
17	13	1	47	15	42	77	116	14
18	13	4	48	15	51	78	122	17
19	13	8	49	16	0	79	127	9
20	13	12	50	16	10	80	134	4
21	13	16	51	16	20	81	139	13
22	13	20	52	16	30	82	145	6
23	13	25	53	16	42	83	151	2
24	13	29	54	16	54	84	156	3
25	13	33	55	17	8	85	161	5
26	13	38	56	17	22	86	166	11
27	13	42	57	17	36	87	171	21
28	13	46	58	17	52	88	176	5
29	13	51	59	18	10	89	181	21
30	13	56	60	18	30	90	187	6

Against 66 Degrees you have 22 Hours, 20 Minutes, the Length of the longest Day; against 67 Degrees you have 24 ordinary Days, 1 Hour, the Length of the longest Day in that Latitude; and the Length of the longest Day under the South Pole is 177 Days, 23 Hours.

*The Explanation of the two following Tables, First, of the Tyde-Table.*

**I**N the first two small Columns on the left Hand, you have the Moon's Age from 1, to 30 : In the next Column, under *Portsmouth, Queenborough, &c.* you have the Time of the Moon's Southing every Day of her Age.

*Example.* I demand the time of High Water the first Day of the Moon's Age at *Portsmouth, Aberdeen, Gravesend, Dundee, &c.* It's High at *Portsmouth* 48 Minutes past 12 at Noon ; the 16th Day (which is in the same Line.) It's High 48 Minutes past 12 at Night. At *Aberdeen* 33 Minutes after 1 ; at *Gravesend* 18 Minutes after 2 ; at *Dundee*, 3 Minutes after 3.

The Moon Souths the 15th Day of her Age, at 12 a-clock at Night, the 30th Day of her Age (or rather the Day that the Moon Changes. She comes to the South at 12 at Noon : It is then High.)

At *Portsmouth* and these other places, in that Column ; at *Aberdeen*, 45 Minutes after 12, &c.

The first Day of the Moon's Age it's high Water at *London-Bridge* 48 Minutes after 3 in the Afternoon, the 16th Day of her Age, 48 min. after 3 in the Morning ; at *Berwick*, 33 Min. after 4, and so thro'.

It is always High in the main Ocean when the Moon comes to the South.

When the Moon is at Full (having then most Influence) the Sea flows Higher than ordinary, which we call *Spring-Tydes* ; it is again Spring Tydes when the Moon Changes ; her Attractive Quality being then assisted by the Sun.

*Of the Table of Expence.*

**O**NE Farthing a Day is 1 Peny 3 Farthings a Week, 7 Pence by the Month or 4 Weeks ; by the equal Month, or 12th Part of the Year, 7 Pence 2 Farthings ; by the Year 7 s. 7 d. 10.

One Shilling a Day is 18 l. 5 s. by the Year ; in Leap-Year, 6 s.

To find the Moon's Age any Day of the Month.

**S**UBTRACT the Day of New Moon from the Day propos'd; the Remainder is the Moon's Age.

For Example. The Moon Changes the 23<sup>d</sup> Day of *Jan.* 1734; I wou'd know the Moon's Age the 31<sup>st</sup> of the same Month?

I subtract 23 from 31, and there remains 8, the Moon's Age required.

But when you wou'd know the Moon's Age in the following Month before the next New Moon, you must add the Day propos'd to the remainder here.

Example 2. I wou'd know the Moon's Age the 17<sup>th</sup> of *Feb.* in the Year above-mention'd? Now I add 17 to 8, the Moon's Age, the last Day of the foregoing Month, which makes 25, the Moon's Age the 17<sup>th</sup> of *February*.

Example 3. I wou'd also know the Moon's Age the 22<sup>d</sup> Day of the same Month, *Feb.* To find which, I add 22 to 8 the Moon's Age, the last Day of *Jan.* the Sum is 30; by which I find the Moon to be in the 30<sup>th</sup> Day of her Age, on which Day she comes always to a Conjunction with the Sun.

Seek for the Day of New Moon in the Tables for that purpose. See Page 63, &c.



A Table shewing the Hour and Minute of High Water any Day of the Moon's Age at these Places.

The Moon's Age.	Portsmouth		Aberdeen		Gravesend		Dundee	
	H.	M.	H.	M.	H.	M.	H.	M.
1 16	12	48	1	23	2	18	3	3
2 17	1	36	2	21	3	6	4	51
3 18	2	24	3	9	3	54	4	39
4 19	3	12	3	57	4	42	5	27
5 20	4	00	4	45	5	30	6	15
6 21	4	48	5	33	6	18	7	3
7 22	5	36	6	21	7	6	7	51
8 23	6	24	7	9	7	54	8	39
9 24	7	12	7	57	8	42	9	27
10 25	8	00	8	45	9	30	10	15
11 26	8	48	9	33	10	18	11	3
12 27	9	36	10	21	11	6	11	51
13 28	10	24	11	9	11	54	12	39
14 29	11	12	11	57	12	42	1	27
15 30	12	00	12	45	1	30	2	15

The Moon's Age.	London		Berwick		Scarb. Q. Tide		Newcastle	
	H.	M.	H.	M.	H.	M.	H.	M.
1 16	3	48	4	33	5	18	6	3
2 17	4	36	5	21	6	6	6	51
3 18	5	24	6	9	6	54	7	39
4 19	6	12	6	57	7	42	8	27
5 20	7	00	7	45	8	30	9	15
6 21	7	48	8	33	9	18	10	3
7 22	8	36	9	21	10	6	10	51
8 23	9	24	10	9	10	54	11	39
9 24	10	12	10	57	11	42	12	27
10 25	11	00	11	45	12	30	1	15
11 26	11	48	12	33	1	18	2	3
12 27	12	36	1	21	2	6	2	51
13 28	1	24	2	9	2	54	3	39
14 29	2	12	2	57	3	42	4	27
15 30	3	00	3	45	4	30	5	15

The Tide-Table continued.

Age.	The Moon's	Plymouth		Bristol		Milford-Hav		Dublin	
		H.	M.	H.	M.	H.	M.	H.	M.
1	16	6	48	7	33	8	18	9	3
2	17	7	36	8	21	9	6	9	51
3	18	8	24	9	9	9	54	10	39
4	19	9	12	9	57	10	42	11	27
5	20	10	00	10	45	11	30	12	15
6	21	10	48	11	33	12	18	1	3
7	22	11	36	12	21	1	6	1	51
8	23	12	24	1	9	1	54	2	39
9	24	1	12	1	57	2	42	3	27
10	25	2	00	2	45	3	30	4	15
11	26	2	48	3	33	4	18	5	3
12	27	3	36	4	21	5	6	5	51
13	28	4	24	5	9	5	54	6	39
14	29	5	12	5	57	6	42	7	27
15	30	6	00	6	45	7	30	8	15

Age.	The Moon's	Catness.		Needles		Yarmouth		Rye	
		H.	M.	H.	M.	H.	M.	H.	M.
1	16	9	48	10	33	11	18	12	3
2	17	10	36	11	21	12	6	12	51
3	18	11	24	12	9	12	54	1	39
4	19	12	12	12	57	1	42	2	27
5	20	1	00	1	45	2	30	3	15
6	21	1	48	2	33	3	18	4	3
7	22	2	36	3	21	4	6	4	51
8	23	3	24	4	9	4	54	5	39
9	24	4	12	4	57	5	42	6	27
10	25	5	00	5	45	6	30	7	15
11	26	5	48	6	33	7	18	8	3
12	27	6	36	7	21	8	6	8	51
13	28	7	24	8	9	8	54	9	39
14	29	8	12	8	57	9	42	10	27
15	30	9	00	9	45	10	30	11	15





*A Table of Expence.*

By the Year.	By the Month, or 28 Days.				By Month, or 12th Pt. of the Year.			By the Week.				By the Day			
	l.	l.	s.	d.	f.	l.	s.	d.	l.	s.	d.	f.	l.	s.	d.
1	0	1	6	2	0	1	8	0	0	04	2	0	0	00	3
2	0	3	1	0	0	3	4	0	0	09	1	0	0	01	1
3	0	4	7	2	0	5	0	0	1	01	3	0	0	02	0
4	0	6	1	3	0	6	8	0	1	06	2	0	0	02	3
5	0	7	8	1	0	8	4	0	1	11	0	0	0	03	1
6	0	9	2	3	0	10	0	0	2	03	3	0	0	04	0
7	0	10	9	1	0	11	8	0	2	08	1	0	0	04	2
8	0	12	3	3	0	13	4	0	3	01	0	0	0	05	1
9	0	13	10	1	0	15	0	0	3	05	2	0	0	06	0
10	0	15	4	2	0	16	8	0	3	10	1	0	0	06	2
11	0	16	11	0	0	18	4	0	4	02	3	0	0	07	1
12	0	18	5	2	1	00	0	0	4	07	2	0	0	07	3
13	1	0	0	0	1	01	8	0	5	00	0	0	0	08	2
14	1	1	6	2	1	03	4	0	5	04	2	0	0	09	1
15	1	3	2	0	1	05	0	0	5	09	1	0	0	09	3
16	1	4	7	2	1	06	8	0	6	01	3	0	0	10	2
17	1	6	1	3	1	08	4	0	6	06	2	0	0	11	1
18	1	7	8	1	1	10	0	0	6	11	0	0	0	11	3
19	1	9	2	3	1	11	8	0	7	03	3	0	1	00	2
20	1	10	9	1	1	13	4	0	7	08	1	0	1	01	1
30	2	6	1	3	2	10	0	0	11	06	2	0	1	07	3
40	3	1	6	2	3	06	8	0	15	04	2	0	2	02	1
50	3	16	11	0	4	03	4	0	19	02	3	0	2	08	3
60	4	12	3	3	5	00	0	1	3	01	0	0	3	03	2
70	5	7	8	1	5	16	8	1	6	11	0	0	3	10	0
80	6	3	1	0	6	13	4	1	10	09	1	0	4	04	2
90	6	18	5	1	7	10	0	1	14	07	2	0	4	11	1
100	7	13	10	1	8	06	8	1	18	05	2	0	5	05	3
200	15	7	8	1	16	13	4	3	16	11	1	0	10	11	2
300	23	1	6	2	25	00	0	5	15	04	3	0	16	05	1
400	30	15	4	3	33	06	8	7	13	10	1	1	01	11	0
500	38	9	2	1	41	13	4	9	12	03	3	1	07	04	3
1000	76	18	5	1	83	06	8	19	04	07	3	2	14	09	2

*A Table of the Kings of Scotland, and their Reigns from Fergus I. to King James the Sixth, and First of England.*

<i>N<sup>o</sup>.</i>	<i>Kings Names.</i>	<i>Began to reign</i>	<i>R. Years</i>	<i>N<sup>o</sup>.</i>	<i>Kings Names.</i>	<i>Began to reign</i>	<i>R. Years</i>
	<i>Before Christ.</i>				<i>A.D.</i>		
1	<b>F</b> ergus I.	330	25	25	Ethodius I.	132	62
2	<b>F</b> eritharis	305	15	26	Satrael	194	3
3	Mainus	290	29	27	Donald I.	197	21
4	Dornadilla	261	28	28	Ethodius II.	218	13
5	Notharus	233	20	29	Athirco	221	21
6	Reuther	213	26	30	Nathalacus	242	11
7	Reutha	187	14	31	Findochus	253	9
8	Thereus	173	12	32	Donald II.	262	1
9	Josina	161	24	33	Donald III.	263	10
10	Fennanas	137	30	34	Crathilinthus	273	36
11	Durstus	107	9	35	Fincomarcus	309	47
12	Evenus I.	98	19	36	Romacus	356	5
13	Gillus	79	2	37	Angufianus	361	2
14	Evenus II.	77	17	38	Fethelmalcus	363	6
15	Ederus	60	48	39	Eugene I.	369	10
16	Evenus III.	13	6	40	Fergus II.	422	16
17	Metellanus	7	39	41	Eugene II.	438	22
	<i>After Christ's Birth.</i>			42	Dongardus	460	5
				43	Constantine I.	465	17
				44	Congalus I.	482	20
				45	Goranus	501	34
18	Caractacus	29	21	46	Eugene III.	533	33
19	Corbredus I.	53	18	47	Congallus II.	568	10
20	Dardanus	71	4	48	Kinnatellus	578	1
21	Corbredus II.	75	30	49	Aidanus	579	27
22	Luctacus	105	3	50	Kennerthus I.	606	$\frac{1}{2}$
23	Mogaldus	108	36	51	Eugene IV.	606	14
24	Gonarus	144	18	52	Ferquhardus	629	12

## The Table of the Kings of Scotland continued.

N <sup>o</sup> .	Kings Names.	Began to reign	R Years	N <sup>o</sup> .	Kings Reigns.	Began to reign	R Years
53	Donald IV.	632	14	81	Constantin. IV	1000	2
54	Ferquardus II.	646	12	82	Grimus	1002	10
55	Malduinus	664	20	83	Malcolm II.	1012	30
56	Eugene V.	684	4	84	Duncan I.	1040	6
57	Eugene VI.	688	9	85	Macbeth	1046	17
58	Amberkeleth	697	2	86	Malcolm III.	1063	33
59	Eugene VII.	699	7	87	Donald VII.	1096	1/2
60	Mordacus	716	16	88	Duncan II.	1099	1
61	Ethfinus	732	30	89	Edgar	1101	9
62	Eugene VIII.	762	3	90	Alexander I.	1110	13
63	Fergus III.	765	3	91	David I.	1123	29
64	Salvathius	768	20	92	Malcolm IV.	1152	10
65	Achaius	788	31	93	William	1162	49
66	Congallus III.	819	5	94	Alexander II.	1214	35
67	Dongallus	824	6	95	Alexander III	1249	34
68	Alpinus	830	4	96	John Baliol	1283	5
69	Kennethus II.	834	20	97	Rob. Bruce	1306	23
70	Donald V.	855	5	98	David II.	1329	2
71	Constantin. II.	860	13	99	Ed. Baliol	1332	38
72	Ethus	874	1	100	Robert II.	1370	19
73	Gregory	875	18	101	Robert III.	1389	14
74	Donald VI.	893	10	102	James I.	1424	13
75	Constantin III.	903	4	103	James II.	1437	23
76	Malcolm I.	943	15	104	James III.	1460	29
77	Induphus	959	9	105	James IV.	1489	25
78	Duffus	968	4	106	James V.	1514	29
79	Culenus	972	5	107	H. & M. Stuart	1543	24
80	Kennethus III	977	23	108	James VI.	1567	35

*A Table of the Kings of England, and their Reigns, from Egbert, the first King, to his present Majesty King George II.*

N <sup>o</sup> .	Kings Names.	Began to Reign A.D.	R Years	N <sup>o</sup> .	Kings Names.	Began to Reign A.D.	R Years
1	<b>E</b> Gbert	819	17	28	Henry 3.	1216	56
2	<b>E</b> Ethelwole	836	19	29	Edward 1.	1272	35
3	Ethelbald	855	5	30	Edward 2.	1307	20
4	Ethelbert	860	6	31	Edward 3.	1327	50
5	Ethelred	866	6	32	Richard 2.	1377	22
6	Alfred	872	29	33	Henry 4.	1399	13
7	Ed. the Elder	901	23	34	Henry 5.	1412	10
8	Ethelstan	924	16	35	Henry 6.	1422	39
9	Edmund	940	6	36	Edward 4.	1461	22
10	Eldred	946	9	27	Edward 5.	1483	00
11	Edwin	955	4	38	Richard 3.	1483	2
12	Edgar	959	16	39	Henry 7.	1485	23
13	Edw. <i>Martyr.</i>	175	3	40	Henry 8.	1509	37
14	Ethelred II.	978	38	41	Edward 6.	1546	7
15	Edm. Ironside	1016	1	42	Mary 1.	1553	5
16	Canute	1017	18	43	Elizabeth	1558	44
17	Harold	1035	5				
18	Hardicanute	1040	2				
19	Edw. <i>Confessor</i>	1042	24				
20	Harold 2.	1066	1				
21	W. <i>Conqueror.</i>	1067	21				
22	W. Rufus	1087	13				
23	Henry 1.	1100	35				
24	Stephen	1135	19				
25	Henry 2.	1154	35				
26	Richard I.	1189	10				
27	John	1199	17				

## KINGS and QUEENS of Great-Britain.

Z	NAMES	Began to Reign	Reign'd Y. M.
1	JAMES I.	1602 Mar. 24	23
2	J CHARLES I.	1625 Mar. 27	22.10
3	CHARLES 2.	1648 Jan. 30	36
4	JAMES 2.	1684 Feb. 6	4
5	William 3. }	1688 Feb. 13	13
6	Mary 2. }		
7	ANNE	1701 Mar. 8	13
8	GEORGE I.	1714 Aug. 1	12.10
9	GEORGE 2.	1727 June 11	
	Crown'd	October	11

Note, In the Beginning of the Table of the Kings of *Scotland*, the 1st Column shews the Year before Christ, till you come to the 17th King, *Metellanus*; in the 7th Year of whose Reign our Saviour was Born. *Caractacus* succeeded in the 29th Year of our Lord, &c.

*Fergus* the first King of *Scotland* began his Reign 230 before Christ, and reigned 25 Years. See the Table.

*James IV.* of *Scotland* married *Margaret*, eldest Daughter to *Henry 7th* of *England*, Grandmother to *James VI.* who was the Son of *Henry Stuart*, Duke of *Albany*, &c. and of *Mary Stuart*, Queen of *Scots*.

He was Crown'd King of *Scotland* the 2d Year of his Age; and the 35th Year of his Reign the Crown of *England* fell to him by the Death of Queen *Elizabeth*. He reign'd 23 Years in *England*, in all 57.

The Elector *Palatine* of the *Rhine*, (afterwards King of *Boheme*) married Princess *Eliz.* His eldest Daughter, by whom he had Princess *Sophia*; his late Majesty's Mother, King *George I.*

After the Romans quitted England, the Saxons divided it into Seven Kingdoms, viz.

1. *Kent*, became a Kingdom in the Year of Christ 455.
2. The Kingdom of the *South Saxons* contain'd *Sussex* and *Surrey* in 488.
3. The Kingdom of the *West Saxons*, contain'd *Cornwall*, *Devon*, *Dorset*, *Somerset*, *Wilts*, *Hants*, *Berks*, *Lancaster*, in 522.
4. The Kingdom of the *East Angles*, comprehended *Norfolk*, *Suffolk*, *Cambridge* and the *Isle of Ely*, in 527.
5. The Kingdom of the *East Saxons*, *Essex*, *Middlesex*, and Part of *Hertfordshire*, in 527.
6. The Kingdom of *Northumberland*, *York*, *Durham*, *Cumberland* and *Westmorland*, in 549.
7. Kingdom of *Merica* contain'd *Gloucester*, *Hereford*, *Worcester*, *Warwick*, *Leicester*, *Rutland*, *Lincoln*, *Huntington*, *Bedford*, *Buckingham*, *Oxford*, *Stafford*, *Nottingham*, *Chester*, and the other Part of *Hertfordshire*, in 582.

*Egbert* was King of the *West Saxons*; he conquer'd the other Kings, put an end to the Heptarchy, and began the Monarchy of *England*.

*Canute* the 16th King, was the first Danish King. 19. The *Saxon* Line restored in the Person of *Edward* the Confessor. 21 *W.* the Conqueror, first *Norman* King. 25 The *Norman* and *Saxon* Lines united in the Person of *Hen. 2.* 33 First King of the Line of *Lancaster*, call'd the *Red Rose*, *Hen. IV.* 36 First King of the Line of *York*, call'd the *White Rose*, *Edward 4.* 39 *Lancaster* and *York* united in the Person of *Henry VII.*

*A Short Description of TIME.*

*And the true Way of Redeeming it.*

**T**IME may be defined to be a certain Passage of Eternity, comprehended between the Creation and the Day of Judgment; in which God executes his Wise Purposes, and Eternal Decrees concerning this sublunary World: For when the Seventh Angel sounds, time shall be no more.

TIME is the Season in which we Mortals are to Act upon the Stage of Life, in the Sight of our all-seeing Creator! And according to our Acting, and Behaviour before Him, He will reward us with unconceivable Felicity and Bliss in his immediate Presence! Or punish us with Eternal Torment and Misery! Forever to be excluded from all hopes of recovering his Favour.

Therefore it concerns every one of us, to make the best of our Time, and not trifle it away upon Vanity and Toys, that will not avail us any thing, when we are call'd to give up our Accounts at the End of Time.

I.

**I**N Thoughts, in Deeds, in Words and Rhime,  
 Let us redeem our precious Time,  
 For Time is swift, and will not stay;  
 A Minutes's ours, we cannot say,  
 The Time that's past, who can recall?  
 And future Time is not at all,



The present Time is only ours  
Let's manage it with all our Pow'rs.

## II.

Why should we spend our Time in Play,  
When this may be our final Day?  
Our present Moment slides like Sand,  
'The next, the Wheels of Time may stand!  
At least, our Time may soon be run,  
And long Eternity begun;  
There's no Devices in the Grave,  
And no Repentance then will save.

## III.

But how presumptuous they are,  
Who say, they have an Hour to spare?  
For Death may call that Hour his own,  
And send them packing with a Frown.  
All things besides we've more profuse,  
To teach us, Time with Care to use:  
Yet flying Time we thus mispend,  
And never think upon our End.

## IV.

O heedless Man! Improve thy Time,  
And trust not Future in thy Prime;  
For Time's the Season in which we may  
Procure eternal Blifs for ay;  
Procure a Treasure beyond Time,  
Where Thieves and Moths can never climb;  
But here we may be robb'd of all,  
And from the highest Honour fall.

## V.

This may suffice us as a Hint,  
 What by redeeming Time is meant.  
 We first must lay it out with Skill,  
 And strive to do our Maker's Will :  
 Love God, and Man, and our own Souls,  
 Without such Love we're empty Fools ;  
 And God must have our chiefest Love,  
 The Father, Son, and Holy Dove.

## VI.

Love each other, as Christ lov'd us !  
 Give, and forgive, and bear his Cross ;  
 We must e're long our Souls restore,  
 To him who gave them us before ;  
 Let's pray to Christ to wash them clean  
 In his dear Blood from ev'ry Sin,  
 From ev'ry Stain they gather'd here,  
 And thro' his Merits make them clear.

## VII.

We must put on his Righteousness,  
 And our Unworthiness confess ;  
 Yet if our Love's true and sincere,  
 He'll give us Grace, dispell our Fear,  
 And at the end, eternal Joys,  
 All Earthly things are worthless Toys :  
 Lord, while we are here, give us Peace,  
 And guide us thro' our mortal Race.

## VIII.

I'll reckon with my God in Time,  
I'll fix my Thoughts on things sublime!  
What Debts I cannot pay with ease,  
In Love, in Thanks, in Songs of Praise,  
My God will freely them forgive,  
Thro' Christ, who dy'd, that I might live!  
I will not set my Heart on Toys,  
Which end with Time, and yield no Joys.

## IX.

Help me, dear Lord, to live upright,  
And do my Work while I have Light,  
At Death resign my Soul to thee,  
And thro' Christ's Merits be made free;  
Made a free Citizen above,  
Heir of Glory, Peace, Joy and Love!  
Co-heir with Christ, our Lord and King,  
Let Heav'n and Earth his Praises sing.

## X.

These are the happy Fruits of Time;  
How Glorious, and how Sublime!  
Who would not then live holy here,  
And their Short Course with Wisdom steer?  
But as for me, I'll praise the Lord;  
I'll fear his Threats, and trust his Word;  
There's time enough, and none to spare,  
For ev'ry Purpose and Affair.

F I N I S,





